THE JOURNAL

OF THE

American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 165, NO. 17 CHICAGO, ILLINOIS DECEMBER 28, 1957
COPYRIGHT, 1957, BY AMERICAN MEDICAL ASSOCIATION

PRACTICAL PLAN FOR LONG-TERM TREATMENT OF HYPERTENSION

Sibley W. Hoobler, M.D., Ann Arbor, Mich.

THE VASCULAR complications of hypertension depend on the interaction of three factors: height of blood pressure, duration of the elevation, and vulnerability of the cardiovascular system. The first two factors are now partially controllable by drug therapy, and effective blood pressure reduction has been rewarded by a decreasing mortality rate in this disease. However, since no antihypertensive drug has yet been developed which does not have its share of disagreeable side-effects, one is naturally hesitant to embark on a program of blood pressure suppression unless there is a strong probability that such a reduction will prolong life. It is therefore wise to classify patients in terms of prognosis and then to weigh the probable long-term benefit to be derived from treatment against the disabilities imposed on the patient by the side-effects of chronic suppressive treatment. An accurate knowledge of the duration and magnitude of the reduction in blood pressure achieved is obviously essential if we are to decide whether the benefits of therapy outweigh the disadvantages.

In general, three classes of patients with essential hypertension can be identified. Group 1 consists of the persons with mild cases; they have quite labile blood pressures rarely exceeding a value of 200/110 mm. Hg and have no evidence of serious cardiac, renal, or cerebral impairment. These individuals have a benign immediate prognosis, although over a span of 15 to 25 years some of them can be expected to develop vascular lesions. Suppressive therapy in these individuals must obviously be limited to the milder forms such as the Rauwolfia alkaloids, and, before the patient embarks on a life-long program of suppression, two criteria must be fulfilled: the treatment must clearly lower

Among 50 physicians responding to a questionnaire, 16 stated that they occasionally had a patient with hypertension take his own blood pressure at home and 3 said they often did so, if the patient was on a prolonged schedule of treatment with hypotensive drugs. Some physicians believed that it is unwise for the patient to know his own blood pressure, even when on therapy with the more potent drugs, but actual investigation did not support this belief. Of 13 patients interviewed, 4 said they did not like to take their own blood pressures and would not advise others to do so, but 9 were satisfied with the program. It has obvious advantages over the infrequent readings of blood pressure obtained under the conditions that usually prevail in a physician's office. The frequent, regular taking of blood pressure is especially important if vigorous antihypertensive therapy is being given in severe cases.

From the Department of Internal Medicine, University of Michigan Medical School.

Read in the Panel and Symposium on the Uses and Abuses of New Drugs and Antibiotics in Therapy before the Section on General Practice at the 106th Annual Meeting of the American Medical Association, New York, June 4, 1957.

the blood pressure, and side-effects must be negligible. This is accomplished best by careful follow-up of the blood pressure at repeated visits, repeated brief "vacations" from therapy to demonstrate that the suppressive action of Rauwolfia continues, and thereafter a regular program of annual or semiannual physical examinations to be certain that the disease has not progressed to a more active stage. So far as side-effects are concerned, it is often overlooked that after two to three months of full doses medication may be continued with one-third to one-fifth the conventional doses, with demonstrable suppression of the blood pressure and with no recognized side-effects. If the objectives of this long-term program, and particularly the semiannual follow-up, are explained to the patient from the start as a sort of insurance against further progression of his disease, no untoward "neurotic" or high blood pressure–dependent habit patterns may be expected to develop. On the contrary, the patient derives reassurance and satisfaction from the fact that a long-term protective program has been instituted and tends to confide his concerns to his family physician rather than carrying them within himself.

Group 2 includes those patients whose blood pressure usually exceeds 200/110 mm. Hg but in whom no complications of vascular disease have been elicited. With these patients, particularly the younger ones, careful trial of Rauwolfia alkaloids represents the first step. If this is not successful, treatment with ganglionic blocking agents is introduced reluctantly and then only on a purely trial-and-error basis with the philosophy that if blood pressure reduction can be secured without disability this therapy may be of prophylactic value. If side-effects at a level of demonstrable control are seen to be disabling, treatment is withheld. It is important that the patient initially understand the relatively benign nature of his illness and the fact that prescribing ganglionic blocking drugs is a matter of trial and error. If these agents prove unsuccessful, they may be then withdrawn without provoking undue anxiety and withheld until the regular semiannual checkup shows either a progressive rise in blood pressure or the development of a vascular complication.

At the other extreme are the patients in group 3, who have blood pressure continuously exceeding 220/120 mm. Hg and who are young and without complications or older and have had a cerebral or cardiac episode, show signs of renal deterioration, and have papilledema and/or retinal hemorrhages and exudates. Experience teaches that the majority of these have an expected life span of less than five years if their blood pressure remains uncontrolled. Effective and sustained blood pressure suppression is mandatory. The random casual blood pressure determination in the physician's office is insufficient to insure the degree of control necessary to prolong life. Usually the Rauwolfia alkaloids are not sufficiently effective, and either sympathectomy or ganglionic blocking agents deserve trial. Our personal experience with Veratrum derivatives or hydralazine, alone or combined with reserpine, in this type of patient has not been as satisfactory as the immediate institution of mecamylamine therapy.

Blood Pressure Taken at Home

Since side-effects on this regimen are troublesome, it is necessary for both the patient and physician to be assured that adequate blood pressure suppression has been achieved. For this reason I make it a rule that every patient about to embark on a ganglionic blocking program is equipped with his own sphygmomanometer and is asked to keep careful blood pressure records. Comparison of these findings with random office blood pressure readings has confirmed the observation of others [1] that the latter are quite unreliable as a basis on which to construct a life-long program of suppressive treatment of the disease.

Establishing such a rule has had two effects upon my practice. First, I have become much more selective in the use of ganglionic blocking agents, limiting their use largely to the indications cited above. Secondly, having made the decision, I take the patient fully into partnership, much as one does when the decision is made to give insulin to a diabetic. He is instructed in the short-term and long-term therapeutic objectives, the technical details of dosage, bowel control, blood pressure measurement, and orthostatic hypotensive reactions. In much the same way as with the diabetic he is given a hopeful prognosis and encouraged to understand his disease and the suppressive nature of the treatment to be instituted.

Experience with this regimen has led gradually to certain simplifications which make it possible to achieve long-term effective control in about 80% of cases without any major variation in the patient's way of living.[2] The blood pressure is taken by a close relative or by the patient himself, with use of either of two improved types of blood pressure cuffs now available at moderate costs. Since it is sought to lower the blood pressure to a point reasonably above that in which orthostatic syncope may occur, I am particularly interested in the systolic blood pressure after one minute of motionless standing. Since the systolic values with the patient sitting and recumbent as well as all diastolic values are interdependent and cannot be changed individually by therapy, I do not insist on the patient recording these values. Admittedly, the lowest readings possible are thus recorded, but this has a reassuring effect on the patient and serves as a useful guide to the physician in supervision of control. If the systolic blood pressure with the patient standing is not reduced, none of the readings will be

V 16
1957

and treatment is ineffective. On the other hand, if systolic pressures on standing fall much below 110 mm. Hg, it is likely that the patient will have some orthostatic episodes. Since mecamylamine has a long duration of action and is usually prescribed twice daily, we ask the patient to take a morning and evening reading each day just prior to medication. This record indicates respectively the degree of overnight effect of the preceding dose and the summation of the effects of the morning dose on the day's activities. The blood pressure cuff is kept at home, and readings before breakfast and supper conform to an early acceptable regimen. Since these readings are taken prior to the next dose of the drug, they carry the disadvantage of recording the least drug effect for the day, but occasional spot checks of the blood pressure at midday or when untoward symptoms appear keep track of these variations.

The commonly held concept that the patient should not know his own blood pressure lest he worry about it is, I believe, no longer valid once it is accepted that we have medicaments which, if accurately used, can control his disease. The key to accurate usage is demonstrably efficient day-to-day control of the blood pressure. Contrary to my own initial impression and that of many physicians, I have found only rarely that such a home blood pressure program is unacceptable or that the patient given the means of measuring his pressures becomes neurotic, discouraged, or tends to desert his family physician. I have found that office visits are much more satisfactory when a day-to-day record is kept and can be reviewed with the patient than when the physician must prescribe entirely on the basis of a single random blood pressure reading taken in a crowded office schedule. Furthermore, unexpected symptoms occurring at home such as neurological accidents, dizziness, headaches, dyspnea and palpitation can be much more rationally explained when the blood pressure at the time of the occurrence is known. The collaboration between patient and physician has turned out to be most gratifying. It has been a constant surprise to observe the way relatively untutored patients learn to record blood pressure and control their disease. Instead of creating anxious neurotics, this home therapy makes patients feel secure and confident that "something is being done" for them.

In order to learn whether such a program conforms to current practices in the management of cases of hypertension, a questionnaire was mailed to 140 internists selected at random, 78 from the state of Michigan and 62 from other states. Among others the following questions were proposed: 1. In private practice do you use ganglionic blocking agents in treatment of hypertension (often, occasionally, never)? 2. Do you have patients on therapy with the above drugs taking their blood pressure in the home (often, occasionally, never)? The table presents the data collected from this survey. It illustrates that approximately half of the physicians queried use on occasion home blood pressure readings in control of cases of severe hypertension treated with ganglionic blocking agents. The majority of those who do not do so agreed with the suggested explanation: "believe it is unwise for patient to know own blood pressure even when on more potent drugs."

To obtain an evaluation of the validity of such an objection to home blood pressure readings, the cooperation of one of our assistant residents interested in psychiatry was secured. Before the plan of home blood pressure control was proposed to them, he questioned each of 13 patients concerning his attitudes toward his disease and toward knowledge of his pressure readings. After a period of several months elapsed, each patient was reexamined. The details of this investigation will be reported elsewhere.[3] Of 13 patients 9 expressed satisfaction with the program. Four stated they did not like to take home blood pressures and would not advise others to do so. Despite good control, two were unhappy originally at the prospect of taking home blood pressures and reacted to the procedure with increased nervousness. The two other patients had had unsatisfactory blood pressure reduction. All of those favorable to the program had had a satisfactory response to therapy without incapacitating side-effects and had originally indicated that they wished to try recording their own blood pressures. There was no evidence of the development of any new neuroses dependent on high blood pressure in any of the patients, even among those dissatisfied with the program. It was concluded that if a patient initially accepts the program of home blood pressure control and responds to any extent to treatment, he will be satisfied and will desire to continue it.

*Results of Questionnaire to Michigan and Out-of-State Internists Concerning Use of Ganglionic Blocking Agents in Treatment of Hypertension**

	Michigan		Out of State	
Use Ganglionic Blocking Agents	No.	%	No.	%
Often	15	30	17	37
Occasionally	28	56	22	48
Never	5	10	3	6
No opinion	2	4	4	9
Blood Pressure Taken at Home				
Often	3	6	11	24
Occasionally	16	32	11	24
Never	28	56	21	45
No opinion	3	6	3	7

*Internists queried: Michigan, 78, 50 replied; out of state, 62, 46 replied.

Summary and Conclusions

Hypertension varies widely as to prognosis, and treatment should be carefully devised to fit the case. All present drug treatment is suppressive only and

has as its sole objective continuous blood pressure reduction which, even in the present state of our ignorance, appears to be a worthwhile goal in most cases. Granted these objectives, the only feasible way to prove that one is controlling the blood pressure in the severe cases where this is mandatory is to have the patient record it in the home. This regimen not only is possible and easy with newer techniques but is the current practice of many physicians and should be encouraged.

1313 E. Ann St.

References

1. Corcoran, A. C.; Dustan, H. P.; and Page, I. H.: Evaluation of Antihypertensive Procedures with Particular Reference to Their Effects on Blood Pressure, Ann. Int. Med. **43:**1161-1177 (Dec.) 1955. Freis, E. D.: Discrepancy Between Home and Office Recordings of Blood Pressure in Patients Under Treatment with Pentapyrrolidinium: Importance of Home Readings in Adjusting Dosages, M. Ann. District of Columbia **23:**363-367; 414 (July) 1954.

2. Cottier, P. T.; Weller, J. M.; and Hoobler, S. W.: Evaluation of Mecamylamine in Treatment of Hypertension, J. Lab. Clin. Med., **50:**199-208 (Aug.) 1957.

3. Westman, J.: Unpublished data.

OBSTETRIC ANALGESIA AND ANESTHESIA IN GENERAL PRACTICE

John J. Bonica, M.D., Tacoma, Wash.

An essential requisite for best results in obstetric anesthesia and analgesia is cooperation between physicians doing deliveries and physicians giving anesthesia. The general practitioner participates in the majority of deliveries in the United States; he therefore plays a significant part in determining the quality of anesthetic care. It must cause the least possible disturbance to the bodily functions of the mother and infant. Psychological preparation of the mother is important. Medication to produce analgesia should not begin until uterine contractions occur not less than four minutes apart and last at least 35 seconds, with the cervix dilated to 3 cm. Sedatives must not be confused with analgesics and narcotics, and the respiratory effects of various drugs must be watched most carefully. There is no one method of anesthesia that is best for all obstetric patients. The several methods of general anesthesia, like the methods for regional anesthesia, have specific advantages and disadvantages. Some methods are more likely than others to delay the onset of spontaneous breathing in the infant, and it is the responsibility of the obsteric team to make sure that the infant is not harmed by hypoxia.

The purposes of this paper are fourfold: (1) to reemphasize the importance of providing safe analgesia and anesthesia to obstetric patients, (2) to describe the various roles the general practitioner can play in providing such service, (3) to mention current concepts concerning this problem, and (4) to discuss briefly the agents and techniques presently available. Comments will be made from the viewpoint of the general practitioner, regardless of the part he may play. Because of limitations of space the discussion will be limited to presentation of basic principles. A detailed exposition of all aspects of the subject may be found elsewhere.[1]

The Problem and Its Importance

In the course of the last decade the importance of providing parturient patients with safe pain relief has won progressively increased recognition. In the understanding and the utilization of the principles of safe obstetric analgesia and anesthesia more has been accomplished in these 10 years than in the previous century.[1a] This is particularly true in the United States due to a number of factors. One of the most important of these is a striking increase in the number of hospital deliveries in this country, to the extent that over 85% of all births occur in the hospital where there is a trained nursing staff and better facilities for analgesia and anesthesia. Another very significant factor is the greater appreciation of problems by the modern expectant mother who, having been made more cognizant of the benefits of modern anesthesia by innumerable newspaper and magazine articles, radio and television programs, and discussions with friends, not only accepts but expects analgesia and anesthesia. The recent approbation of relief from pain during

From the Department of Anesthesiology and Obstetrics, Tacoma General Hospital and Pierce County Hospital.

Read before the Section on General Practice at the 106th Annual Meeting of the American Medical Association, New York, June 5, 1957.

V 16
1957

labor and delivery by many of the world's great religious leaders has also furthered the cause of obstetric analgesia and anesthesia.

But perhaps the most important factor has been the greater appreciation by the medical profession of its obligation to provide these patients with the best anesthesiologic service possible.[2] There has been a recent trend to replace the archaic and malefic concept that obstetric anesthesia is a simple procedure that requires little or no skill with the modern view that its administration is often a complex and certainly a very important form of therapeutics. This is so not only because two lives are involved instead of one but also because the usual mechanical and physiological problems of pregnancy and the occasional obstetric or medical complications reduce the flexibility and margin of safety and indicate expert use of analgesics and anesthetics.

Finally, though not of least importance among the factors that have provoked greater interest in obstetric analgesia and anesthesia, there have been the advances in medicine with consequent changes in concepts and practices. Better prenatal care and diet control, more widespread and proper application of forceps, increase in the number of cesarean deliveries, the advent of antibiotics, and the greater availability of blood have markedly reduced deaths due to infection, hemorrhage, toxemia, and other obstetric complications.[1a] Consequently anesthesia has been brought into sharper focus as a cause of complications and death. Physicians now fully realize that if maternal and fetal mortality and morbidity are to be reduced further, it is essential that women in labor receive better anesthesia than in the past. The trend to provide better anesthesia to obstetric patients has been further promoted by two other developments: the remarkable advances in surgery made possible by physician anesthetists and the great benefits derived therefrom by the surgical patient, and the significant decrease in maternal and fetal mortality in those obstetric departments where all of the patients are provided with physician anesthesiologic service.

The Role of the General Practitioner

The general practitioner, participating as he does in the majority of the deliveries in the United States, has a great interest in obstetric analgesia and anesthesia. Consequently he can and should play a very significant role in providing American mothers with an optimal anesthesiologic service. His activities may be in one of several directions. More frequently he manages the analgesia during the first stage of labor and then carries out the delivery while the patient is under the influence of anesthesia administered by nonprofessional personnel. In other instances it is necessary for him to administer some form of regional anesthesia and then deliver the patient, who is usually managed by unskilled personnel. Since, under both of these circumstances, he carries the full responsibility for the anesthetization as well as the delivery, it is incumbent upon him to be well versed in all aspects of obstetric analgesia and anesthesia. Even in circumstances where the service of an expert anesthesiologist is available, it is essential for the generalist to be fully aware of the indications, advantages, disadvantages, and limitations of each method so that he can integrate his functions with those of the anesthesiologist. It needs to be stressed that the activities of each of these two physicians are so interdependent that only out of their mutual understanding and their consideration for each other's problems can safe and comfortable childbirth be obtained. This is without doubt one of the most essential requisites for optimal results with obstetric analgesia and anesthesia.

In a few instances the general practitioner is placed in the position of administering the anesthetic to a patient who is being delivered by someone else. Obviously, in order to discharge this important duty properly he needs a knowledge beyond the mere dropping of ether onto a mask, the performance of a spinal puncture, or the manipulation of an anesthetic machine. I would like to stress that the general practitioner can make the most important contribution toward providing American mothers with safer anesthesia, if only he takes advantage of the opportunities that are presently available to him.

It is now being realized that, despite the unprecedented increase in the number of full-time anesthesiologists and their recent manifestation of greater interest in obstetric anesthesia, their number is insufficient to provide professional anesthesia to the four million mothers who deliver each year in the United States.[2] Even if the growth of this specialty proceeds at the same rapid pace it has since World War II, there still will be a serious shortage of full-time anesthesiologists in 1965, when the predicted annual births will be over five million.[1a] The increasing appreciation of the problem and of the number of anesthetic complications and deaths related to this shortage together with the increasing demand for such professional services have provoked a great deal of thought, consideration, and work on the part of many interested individuals and has resulted in the formation of a special committee. These informed physicians agree that the best solution to the problem is to encourage general practitioners to undertake formalized training in obstetric anesthesia and then to devote part of their time to its practice. This is particularly important in smaller communities where the services of a full-time anesthesiologist are not available. To this end the American Society of Anesthesiologists and the American Academy of General Practice have cooperated in encouraging general practitioners to enter this field, and special courses ranging from two weeks to three months or longer have been made available. In addition to the economic advantage of such practice, the general practitioner will experience the satisfaction of providing a much-

needed specialized service to the most important segment of our population and to the future citizens of America.

Basic Principles of Obstetric Analgesia and Anesthesia

Regardless of what methods of analgesia and anesthesia are employed, certain basic principles must be acknowledged. The objective is to provide optimal relief of pain to the mother without unusual risk to her infant. The *sine qua non* of obstetric anesthesia should always be safety for mother and child. Unfortunately, it is only too true that relief from pain is always bought at a price exacted from the patient in the form of physiological and psychological deviation or depletions. It is the primary mission of the physician to select indicated agents and techniques and employ them in such a manner as to cause the least degree of disturbance to the bodily functions of the mother and none to those of the infant. How effectively he discharges such a grave responsibility depends primarily upon his judgment, skill, and experience: these are the important factors in obtaining optimal results in this field, and they are more important than the agents used.

No anesthetic agent or technique offers such superior advantages over others that it can or should be employed in all cases. Therefore, the patient should never be forced to accept a technique unless unusual circumstances exist which preclude the use of all other methods. The type of analgesia and anesthesia must be tailored to the needs of the individual patient. There are many factors which must be considered in the selection of methods that will provide the best results: the physiological status, psychological make-up and desires of the mother; the condition of the infant at the time of delivery; the obstetric requirements for the delivery; whether complications exist; the personality, experience, skill, and practices of the physician who is to perform the delivery, as well as his concepts concerning obstetric anesthesia; and the environment and facilities available to the anesthetist.

All systemic agents, whether administered by inhalation, intravenously, or enterally, cross the placental barrier and may affect the infant adversely; all drugs that depress the mother's vital mechanisms will also depress those of the infant. Techniques that may cause hypotension create the hazard of hypoxia of the infant as well as of the mother.

No form of analgesic or anesthetic should be administered unless equipment for administering oxygen and performing resuscitation is available. These include means for ventilating the patient, an artificial airway (preferably endotracheal tubes), negative suction apparatus for aspiration of mucus, vomitus, or blood, and tables that can be rapidly maneuvered into the Trendelenburg position.

One of the most basic considerations in obstetric analgesia and anesthesia is the proper mental, psychological, and physiological preparation of the mother. It is generally acknowledged that the patient of today deserves and will reap great benefits from the time and effort spent by her physician in informing her (and her husband) about the course of events of pregnancy. This can be accomplished during the prenatal visits to the office or, as some physicians prefer to do, it can be done by having monthly group information periods which are attended also by the husbands. During these periods information is disseminated verbally and by such aids as slides, motion pictures, manikins, and charts. This form of reeducation is of inestimable value in freeing the expectant mother from misconceptions, superstitions, false beliefs, and fears instilled into her by misinformed relatives and friends or by improper teachings. Most important in the mental preparation of the obstetric patient is the physician's manifestation of friendship and sympathetic understanding, his kindness and reassurance, and other human qualities which comprise the "art" of medicine and enhance the development of rapport. An optimal physician-patient relationship and complete confidence in the doctor are potent forces in relieving pain and enhancing the action of analgesics.

During one of these prenatal visits analgesia and and anesthesia should be discussed in some detail, and the advantages, disadvantages, and limitations of each technique should be indicated. If the anesthetic is to be administered by another physician, it would be of inestimable value to have the patient discuss the problem with him during the prenatal visit. While the marked shortage and instability of physician anesthetists make this impractical at the present time, it is something that should be considered for future practices.

Although the physician may indicate what technique he considers preferable, great caution should be exercised in promising the patient either a specific method or painless labor. The patient should rather be assured that there are many means available for relieving pain and that all efforts compatible with safety will be made to lessen the discomfort. If he does otherwise, the physician risks loss of the patient's confidence, with consequent development of tension, anxiety, and fear should the planned method of pain relief fail or should unforeseen circumstances preclude its use.

To enhance the psychological preparation of the patient further everyone that participates in the hospital care of the patient–from the admission clerk to the house staff–should be inculcated with the importance of a friendly, reassuring attitude. Everyone should bring the patient a quiet, considerate humanity and instill a confidence and security based upon the conviction that everything possible will be done to relieve her of her discomfort and to make possible safe delivery of a healthy child. The obstetric nurse, by the very nature of her work and

V 16
1957

her close association with the patient during the most emotionally critical phase of the pregnancy, holds the key to either success or failure for this entire program. A warm, sympathetic attitude, reassurance, prompt response to requests, together with the efficient discharge of the physician's orders, will do a great deal to allay fears, instill confidence, and consequently enhance the objectives of analgesia.

A few words concerning the physical preparation of the patient for analgesia and anesthesia: she should be specifically instructed to refrain from eating solid foods after active labor begins. It will prove profitable to explain to her that labor and medication markedly interfere with digestion and absorption and delay gastric emptying to such an extent that partially digested food may remain in the stomach for as long as 12 hours. The hazards of regurgitation or vomiting and consequent aspiration of stomach contents into the tracheobronchial tree cannot be overemphasized. In a recent survey this complication was the most frequent (over 50%) cause of death and one of the primary etiological factors of maternal and fetal hypoxia.[3]

Analgesia During Labor

Relief from pain during the first stage of labor can be effected by psychological means either alone or in combination with pharmacological agents. The latter may be categorized into two major groups: systemic drugs and regional analgesics. The systemic drugs in common use include narcotic analgesics, barbiturates, scopolamine, inhalation agents, and rectal preparations. The regional techniques presently employed for this purpose are saddle block and continuous caudal and continuous epidural block.

The judicious application of one or more of these methods is of great value to relieve pain, allay apprehension, and obviate emotional turmoil during the first stage of labor. The important role of psychological aids in obtaining these desiderata has been mentioned. Unfortunately, limitation of space will not permit a discussion of the use of the psychosomatic approach of Grantly Dick Read as a sole method of management.[4] Suffice it to state that when properly carried out under ideal conditions the Read method is sufficient for a number of multiparous and some primiparous patients. The preparation of the mother as recommended by Read may have a strong positive suggestive effect in producing relaxation and in decreasing pain, just as fearsome tales of agony may increase it. Small doses of meperidine (Demerol) or other potent analgesic may prove a very effective adjunct should discomfort become extreme. Even in those patients in whom the method partially fails, it is of value because they will require much smaller amounts of analgesic and anesthetic drugs.

The purpose of the use of drugs during the first stage of labor is to produce sedation and amnesia and to effect a degree of analgesia for the mother without coincidental depression of vital functions or disturbances of the homeostatic mechanism of either mother or infant. The judicious use of these agents enhances the preanesthetic preparation of the mother and makes possible a more rapid induction, a more controllable maintenance, and a more pleasant emergence. It is obvious that the plan for using these drugs should be correlated with the plan of anesthesia and should take into consideration the existence of such complications as prematurity and postmaturity, systemic diseases of the mother, hemorrhage, the presence of toxemia, and the character of the labor. The importance of individualizing the dose, the route, and the frequency of administration of the selected drugs or drug combinations cannot be overemphasized.

It is important to remember that none of the chemical agents used at the present time to provide analgesia during the first stage of labor is devoid of side-effects. Although there are many other etiological factors that cause the more than 100,000 perinatal deaths in the United States yearly, the misuse of drugs during the first stage of labor constitutes one of the most important causes. Undesirable side-effects can be minimized only by the careful selection of the drug of choice for a specific effect and by its administration in optimal doses and at the proper time.[5] By definition, the optimal dose is the amount of drug which will provide the desired beneficial effects (in this case the relief of pain, sedation, and amnesia) with a minimal degree of undesirable side-actions. The determination of the optimal time for starting medicinal analgesia demands astute judgment which can only be garnered from experience. A common grievous error is to initiate it too early and hence to delay the course of labor. One rule should be absolute: such medication should never be started until positive proof exists that the cervix is showing progressive effacement and dilatation. Uterine contractions should occur at regular intervals of not longer than 3 to 4 minutes and should last 35 to 45 seconds, and the cervix should be dilated 3 cm.

The recent trend is to employ a balanced type of analgesia which entails the use of several drugs that produce a summated or potentiated therapeutic effect by entirely differing mechanisms. In this way one can employ smaller doses of constituent drugs to produce greater therapeutic effect with fewer or less severe undesirable actions.

Barbiturates are preeminently hypnotics and sedatives and should be employed specifically for this purpose during the early phases of labor in combination with analgesic agents. In order to avoid prolonged depressant effects on the mother and infant, short-acting barbiturates such as pentobarbital sodium (Nembutal) or secobarbital (Seconal) should be used in doses ranging from 50 to 200 mg. (¾ to 3 grains). Larger doses produce marked respiratory depression of the mother and infant and prolong labor.

Narcotic analgesics produce relief by decreasing or inhibiting the perception of pain, altering the psychological reaction associated with such perception, and inducing lethargy or sleep.[6] In equivalent analgesic doses most of these drugs produce similar undesirable effects, including respiratory depression, nausea, vomiting, interference with normal mechanism of labor, and decreased uterine irritability. Narcotics are best employed with scopolamine. The use of these drugs should be postponed until the pain is moderate to severe and the cervix is considerably effaced and dilated about 3 to 4 cm. If labor is progressing rapidly, especially in multigravidas, these drugs should be omitted because their peak depressant effect may not have disappeared by the time the baby is delivered. In any case narcotics (alphaprodine [Nisentil] excepted) should not be administered within two hours of the predicted time of delivery. The optimal dose of morphine is 10 mg.; of meperidine, 50 to 75 mg.; and of alphaprodine, 40 mg. Larger amounts merely increase the respiratory depression without commensurate increase in analgesia. These drugs should not be used in premature labor because the hazard of fetal respiratory depression is increased.

Nalorphine (Nalline) and levallorphan (Lorfan) as narcotic antagonists have enhanced the role of narcotic analgesics in managing the first stage of labor. These drugs have a marked ability to prevent or promptly diminish or abolish respiratory depression and many of the other actions of narcotic analgesics without affecting uterine tone, the progress of labor, and the postpartum course. Intravenous administration of 10 to 20 mg. of nalorphine or 1 to 2 mg. of levallorphan to patients who have received large doses of narcotics during the first stage of labor reduces neonatal respiratory depression. Infants who exhibit marked respiratory depression or apnea as a consequence of the administration of narcotics to the mother can be effectively treated by the injection of 0.2 to 0.4 mg. of nalorphine or 0.02 to 0.04 mg. of levallorphan diluted in 2 cc. of isotonic sodium chloride solution into the umbilical vein. It should be stressed that these antagonists are not effective in preventing or abolishing depression due to barbiturates, general anesthetics, non-narcotic agents, or intracranial disorders. Moreover, when these drugs are administered to individuals who have not received narcotics, they produce depression. Therefore, they should not be used in such instances lest they aggravate the depression.

Scopolamine has the specific power of producing amnesia, of augmenting the sedative and hypnotic effects produced earlier and to a lesser degree by the barbiturates, and of drying secretions. The optimal dose of this drug is 0.3 mg. (1/200 grain) repeated at one-hour to two-hour intervals. When larger doses than 0.3 mg. are given the benefit from the increased amnesia is more than offset by the discomfort from the marked dryness and by the disorientation produced by such large doses. The combination of large doses of scopolamine and morphine to produce twilight sleep has come into disfavor among many clinicians because of the marked restlessness and increased neonatal mortality which resulted from the cumulative effects of the drugs.

Chlorpromazine (Thorazine) and promethazine (Phenergan) relieve apprehension and anxiety, produce sedation, potentiate analgesics, and decrease the incidence of postanesthetic nausea and vomiting. Through its effects on the autonomic nervous system chlorpromazine may produce hypotension, which may become a serious problem if extensive vasomotor paralysis is induced by spinal, caudal, or epidural block. For this reason the use of chlorpromazine should be avoided in patients who are to be managed with these forms of conduction anesthesia.

Nitrous oxide and trichloroethylene (Trilene) may be administered (by the patient or the anesthesiologist) during the first stage of labor. Gas should be inhaled at the very onset or even in anticipation of each uterine contraction in order that an adequate blood concentration of the drug is obtained during the peak of the contraction. Conduction techniques may also be used very effectively during the first stage of labor and then continued for the delivery. These will be detailed subsequently.

Anesthesia for Delivery

At the risk of belaboring a point already stressed, it should be stated there is no particular anesthetic technique or agent which is best for all obstetric patients. Let it be remembered that each agent and technique has its specific indications and advantages, as well as certain inherent hazards which must be considered in order to select the optimal method for each patient. Some important considerations include the following[7]: a history of a recent meal indicates regional anesthesia; hypovolemia contraindicates techniques which entail extensive vasomotor block (spinal or extradural); a patient with dyspnea, whether due to low cardiac or respiratory reserve, should not be permitted to make strong expulsive efforts, but should be managed with saddle, continuous caudal, or epidural block; a tightly contracted uterus can only be relaxed with deep general anesthesia; cervical dystocia cannot be mitigated with any method of anesthesia, even deep general anesthesia; if labor is really well established no drug, including morphine, will stop it; and no method of pain relief will improve the length or strength of uterine contractions.

General Anesthesia for Delivery

Inhalation Anesthesia.—Inhalation anesthesia affords the following distinct advantages: greater control of depth and duration of anesthesia; retrieval of the agent without residual effect on body tissues; rapid, smooth induction; and quick recovery. Since inhalation anesthetic agents undergo no chemical or physical change in their passage through the

V 16
1957

mother, the placenta, or the fetus, they possess the advantages of lability of action and reversibility of effect on the parenchymatous structures of the mother and baby. Certain obstetric complications, such as tetanic contractions of the uterus, Bandl's contraction ring, and internal version can only be mitigated by producing transient, deep anesthesia with an inhalation agent. Spinal, caudal, epidural, or other regional anesthetic techniques and muscle relaxants are of no value in coping with these obstetric problems.

Among the disadvantages of inhalation anesthesia are the difficulty of the induction of anesthesia in patients who have been improperly prepared, the frequently caused nausea and vomiting, depression of respiratory and other bodily functions, and the danger of aspiration of stomach contents. This method is, therefore, contraindicated in patients who have recently eaten, in those with acute infection or other pathology of the respiratory tract, and in those with severe diabetes, kidney or liver disease, or toxemia of pregnancy. It should not be used for the delivery of premature infants nor in patients who have received heavy premedication during the first stage of labor.

For optimal results with this method the patient should have proper premedication, and if she has not received scopolamine within one hour of the delivery she should be given atropine 0.4 mg. (1/150 grain) intravenously just prior to the induction. It is most essential to avoid respiratory obstruction by the use of an artificial airway if necessary. The concentration of oxygen should never be less than 25% lest the patient and her infant sustain deleterious effects from hypoxia. A soda-lime absorber must be used with all inhalation anesthetic mixtures in order to eliminate carbon dioxide. The only exception to this rule is in the use of trichloroethylene, which is decomposed by soda lime. If the synergistic action of heavy preanesthetic medication and the anesthetic agent depress the respiration, it is essential to assist the ventilatory efforts of the patient so as to assure adequate gaseous exchange.

Since even with the use under optimal conditions of such potent agents as cyclopropane transition from first-stage to third-stage anesthesia consumes several minutes, it is extremely important that the obstetrician refrain from stimulating the patient by examining her or applying forceps during the induction phase. Such premature stimulation markedly interferes with the induction and may even result in the production of laryngospasm and bronchospasm. This is without doubt one of the most common and most grievous errors made by some physicians during vaginal delivery. Another common error is application of vigorous suprafundic pressure with consequent increase in intra-abdominal pressure. This not only interferes with cardiovascular and respiratory dynamics but is also apt to cause regurgitation of gastric contents with the possibility of aspiration into the tracheobronchial tree.

Nitrous Oxide–Oxygen.—Nitrous oxide is very useful for the delivery as well as for the first stage of labor. Just before the delivery a mixture containing 75% nitrous oxide and 25% oxygen is administered. At the very onset or just prior to the uterine contraction the patient is instructed to take three deep breaths and then to bear down. As soon as the contraction ceases the mask is removed and the patient allowed to breathe room air. The patient should receive constant encouragement and instructions from one of the individuals in the room. Everyone else should refrain from talking to the patient, lest she become confused and uncooperative. When the patient is ready to deliver, the mixture is administered continuously; and if the patient has been properly premedicated this may be sufficient for the second and third stages of labor. However, in most instances it will be necessary to introduce a more potent agent such as cyclopropane or ether. This is especially so if forceps or version extraction is to be performed. For these conditions the patient needs to be under sufficiently deep anesthesia for perineal relaxation to be effected. After the infant is delivered the anesthesia is lightened and maintained in the first plane for the repair of the episiotomy.

Cyclopropane.—Cyclopropane is the best inhalation anesthetic available for vaginal delivery because it affords the following advantages: it has a pleasant, rapid induction and emergence; it permits the use of high concentrations of oxygen; and it produces no ill-effects on parenchymatous structures. Its potency and lability of action afford a flexibility in its administration which cannot be duplicated by any other agent. Its chief disadvantages are its potential inflammability and explosiveness, an occasional production of disturbance of cardiac rhythm, and a tendency to produce mild maternal and fetal respiratory depression when anesthesia is carried deeper than the first plane of the third stage.

Diethyl Ether.—Diethyl ether remains a very useful anesthetic agent because of its low cost, portability, ease of administration, and a margin of safety wider than that of any other inhalation agent. Since induction with ether is slow and unpleasant, it is best employed after induction with nitrous oxide, cyclopropane, vinyl ether, or one of the other more pleasant and rapid-acting agents. If the open-drop technique is used, it is necessary to insufflate 300 to 500 cc. of oxygen per minute under the mask in order to avoid hypoxia. Diethyl ether produces the highest incidence of nausea and vomiting, irritates the respiratory tract, disturbs acid-base balance, and produces effects on the kidneys. It is therefore contraindicated in patients with acute respiratory infection, pulmonary disease, acidosis, diabetes, kidney disease, or increased intracranial pressure.

Intravenous Anesthesia.—Intravenous administration of thiopental (Pentothal) sodium or thiamylal (Surital) may be employed in combination with

nitrous oxide to produce a rapid induction during vaginal or abdominal delivery. It should be stressed that an appreciable amount of the drug passes through the placenta in 5 to 6 minutes and equilibrium between maternal and fetal circulation is established within 10 to 12 minutes. It is therefore necessary to restrict the use of this method to those patients who will deliver not later than seven or eight minutes after the onset of administration. Its use is not recommended for the occasional or inexperienced anesthesiologist.

Regional Anesthesia for Delivery

In recent years there has been a significant increase in the use of regional analgesia and anesthesia for labor, vaginal delivery, and cesarian sections. This has been due to the advent of better local anesthetics, improvements in techniques, availability of more physicians who are skilled in their administrations, and, most important, appreciation of the advantages this method affords to the mother, infant, and obstetrician. The outstanding benefit of regional anesthesia in obstetrics is the absence of respiratory depression and other systemic effects deleterious to both fetus and mother. This feature is particularly important for the premature or immature fetus, or whenever obstetric complications cause fetal distress. Regional anesthesia also provides the mother with many benefits. It precludes the danger of the aspiration of gastrointestinal contents into the tracheobronchial tree, and is therefore especially indicated in mothers who have ingested food within a short period before the onset of labor. Because uterine tone is maintained, blood loss is less than with general anesthesia. Moreover, there is less nausea and vomiting and general morbidity. Finally, but not least important, this method permits the mother to be awake during the delivery to experience the pleasure of actively participating in the actual delivery and to see her child as soon as it is born.

Pudendal Block.—The benefits described above can be obtained to a maximum degree with pudendal block, with the use of which analgesia is usually adequate, the uterus fully retains its tone and retracts promptly, and the infant cries lustily on delivery. Unless the block is followed by drug reaction, it has no deleterious effects whatever on the fetus or the mother. The disadvantages of this technique are that it is more difficult and time-consuming to execute, it is followed by a higher percentage of failures than saddle block, and it does not provide relief from uterine contractions. Combinations with paracervical block or with trichloroethylene, nitrous oxide, and other analgesics have proved effective in diminishing or eliminating the pain of uterine contractions.

Spinal Conduction Anesthesia.—In addition to the aforementioned advantages, spinal block in the form of subarachnoid, caudal, and epidural block offer the mother other benefits. By effecting the "continuous" technique these may be employed to provide complete analgesia for the first stage of labor and anesthesia for the second and third stages without depression to the infant's condition. The intense perineal relaxation facilitates operative intervention and thus diminishes the hazards of delivery for both mother and infant. These methods are especially indicated in delivery of the occiput posterior, the large baby in transverse arrest, and in multiple births. Moreover, the analgesia may be extended should cesarean section become necessary.

In order to obtain all the aforementioned advantages of these techniques it is necessary to realize some of their limitations, disadvantages, and complications. Obviously this method is not applicable to all obstetric patients. Many uncomplicated cases may and should be treated with general analgesia and anesthesia. The administrator must be skilled not only in the execution of the block but also in the management of the patient. Since severe hypotension occasionally occurs as a result of vasomotor block, it is essential to observe the patient closely and to treat this complication promptly lest it produce hypoxia of the infant as well as of the mother with possible serious consequences. The blood pressure should be measured every 2 minutes during the first 10 minutes after the block is executed and every 5 minutes thereafter. Hypotension (90 mm. Hg systolic or lower) should be treated promptly by administering 20 mg. of ephedrine, 2 mg. of methoxamine (Vasoxyl), or equivalent doses of other vasopressors intravenously. This should then be complemented with an intramuscular dose of the vasopressor and with oxygen. Oxygen should be administered with all regional techniques, especially during the delivery. It should be stressed that most of the fatalities with these techniques have been due to improper management of the patient after the block has been completed. Because of the concomitant vasomotor paralysis, spinal, caudal, or epidural techniques should be avoided in abruptio placenta or placenta praevia because they may aggravate the hemorrhage and produce shock. In addition these techniques should be avoided in patients who have hypovolemia due to marked anemia, shock, or any other cause.

Saddle Block.—Subarachnoid block is the quickest and one of the most effective methods for providing obstetric analgesia and anesthesia. During the past decade many reports have been published containing accounts of its successful use in well over a million patients without serious complications. The popularity of this technique is due to the simplicity of induction; the rapidity, certainty, and duration of action; and the minimal side-effects. Its disadvantages are those of spinal anesthesia in general, the most important being hypotension and postanesthetic cephalgia, which seem to occur more frequently in obstetric patients than in surgical

V 165
1957

patients. Since the technique of saddle block with dibucaine (Nupercaine) or tetracaine (Pontocaine) provides analgesia for three to four hours it may be used to great advantage for the first stage of labor as well as for terminal anesthesia. For this purpose it is best to administer the block when the cervix is dilated 8 to 9 cm. in primiparas and 6 to 7 cm. in multiparas. In America, spinal anesthesia is also the most widely used method for cesarean section. The continuous spinal analgesia as formerly used for either vaginal delivery or cesarean section has been virtually abandoned.

The precautions concerning blood pressure and the administration of oxygen are especially important with this technique. It is well to remember that one half or less of the dose of spinal anesthesia as usually given to nonpregnant women is sufficient. Thus 2.5 to a maximum of 3.0 mg. of dibucaine or tetracaine are very adequate for vaginal delivery. Overdose is the most common cause of serious complications following spinal anesthesia in pregnant women. This technique is contraindicated in patients with known or suspected diseases of the central nervous system, syphilis, mental problems, history of neurological sequalae following previous spinal anesthesia, obvious hemorrhage or shock, and in those in whom uterine relaxation is required.

Caudal Block.—Recently there has been a trend toward more widespread use of single and continuous caudal block in those localities where specialists in anesthesiology provide services to obstetric patients. When skillfully administered to properly selected patients it provides almost ideal conditions for both mother and infant. Continuous caudal block is particularly good for those handicapped with severe heart disease, pulmonary tuberculosis, acute respiratory infections, metabolic disease, diabetes mellitus, toxemia, and nephritis, since it protects the mother from the stress and strain of labor and also protects the infant.

The disadvantages of caudal as well as epidural block are that they require greater skill and experience to administer properly, increase the incidence of forceps deliveries, and may prolong labor. The last is prone to occur if the block is started too early. This is one of the most frequent mistakes made by oversolicitous physicians who complicate the management of labor in order to fulfill their promises to the patient that she will have no pain during labor. These procedures should not be started until uterine contractions occur at 3-minute intervals or less and last 35 to 40 seconds or more and the cervix is dilated at least 3 cm. in multiparas and 5 cm. in primiparas.

The dangers inherent in these techniques are infection and inadvertent spinal injection. The latter is a most serious complication which makes it mandatory that the physician who executes caudal or epidural anesthesia have experience and be skilled in their administration; these procedures should be avoided by the occasional anesthetist.

Spinal Epidural Block.—In recent years the use of spinal epidural block for obstetrics has been reported with increasing frequency.[6] For both vaginal and abdominal delivery it provides all the benefits of caudal and saddle block without many of their disadvantages. It offers two significant advantages over caudal anesthesia: first, less volume of the solution is needed, and, second, in the hands of an operator who can perform each of the two techniques with equal dexterity, the incidence of failure is less with the lumbar epidural technique than with the caudal because anomalies are less frequent in the lumbar spine than in the sacrum. In addition spinal epidural block produces subjective relief of labor pains more rapidly than when the solution is injected by the caudal route, probably because the site of injection is nearer to the sensory pain fibers of the uterus. On the other hand, it is more difficult to master and may involve more serious complications since in the lumbar region it is easier to enter the dura accidentally than when the needle is inserted through sacrococcygeal hiatus.

Resuscitation of Newborn Infants

One of the major responsibilities of the obstetric team is, of course, to facilitate the initiation and maintenance of ventilation in the newborn infant. In addition to proper preanesthetic and anesthetic management the physician performing the delivery has the duty of clearing the infant's airway as soon as the head is delivered and immediately thereafter. Extreme gentleness must be exercised in placing the tip of the Asepto syringe or other aspirative equipment with stiff tip in the throat or larynx of the infant, lest lacerations of the mucosa and edema result. The infant should be held in a head-down position during the first few minutes to facilitate the drainage of secretions from the tracheobronchial tree into the pharynx. Should the infant have a great amount of secretion, it is well to suspend it by its feet and hyperextend the head in order to place the trachea in line with the pharynx and mouth, thus greatly facilitating drainage. It is recommended that the infant be held below the placental level prior to clamping the cord to facilitate the normal passage of blood from placenta to baby.

If the infant's condition is depressed, proper resuscitation must be accomplished. Resuscitation should be instituted if (1) the heart rate is below 100 or above 160 per minute or irregular for 60 seconds or more, or (2) if the infant fails to breathe spontaneously within one minute of birth.[7] Apnea results in hypoxia and retention of carbon dioxide, which rapidly progress to severe degrees. Since these further markedly depress the respiratory center and other vital functions, it is essential to correct them promptly.

The basic principles of resuscitation are (1) immediate aspiration of all secretions from the air passages and stomach, (2) administration of oxygen

and elimination of carbon dioxide, (3) gentle and minimal handling, (4) maintenance of body temperature, and (5) prevention of infection. In addition narcotic antagonists may also be administered if the depression is definitely known to be due to narcotic analgesics. Infants with minimal depression have good muscle tone and require only aspiration of secretions and adequate ventilation. Although many mechanical ventilators are available, the simplest and most inexpensive and at the same time one of the most effective methods is the use of an infant anesthetic mask, canister, and bag connected to a small tank of oxygen by means of a regulator. The mask is applied to the infant's face and the bag filled with oxygen is squeezed intermittently until the infant establishes spontaneous respiration. Since the depressed infant already has an increased carbon dioxide tension in the blood, gaseous mixtures containing carbon dioxide, such as carbogen, should not be used because these aggravate rather than relieve the respiratory and circulatory depression.

It is essential to assure an unobstructed airway by extending the head and, if necessary, by inserting a small oropharyngeal airway. Occasionally some of the oxygen enters the stomach and needs to be aspirated with a small catheter. Endotracheal intubation is only necessary in infants with profound depression and muscular flaccidity who thus require prolonged ventilation. If a mechanical ventilator is employed it is essential that the operator insure that the infant has an unobstructed airway. Should the obstetric team be remiss and have no means of ventilating the infant, mouth-to-mouth insufflation may be used. It should be remembered, however, that this method carries serious risk of infection [7] and that the expired air contains only 14.5% oxygen. Other old methods of resuscitation requiring manual manipulation such as Sylvester's, Schultze's, and Byrd's, and rhythmic compressions of the chest are totally ineffective and often injurious.[7]

The use of contrast baths or traumatic physical stimulation by spanking, swinging, or other archaic methods is to be condemned. The use of these and of medullary stimulants, such as nikethamide (Coramine), alpha-lobeline, picrotoxin, and pentylenetetrazole (Metrazol) not only are valueless but are actually detrimental to the infant. These central nervous system stimulants increase the oxygen need of the body in the presence of already inadequate oxygen intake and thus aggravate the anoxic state of the infant.

Summary

The provision of analgesia during the first stage of labor and anesthesia for the delivery is one of the physician's most important obligations to obstetric patients. Since the general practitioner participates in the majority of deliveries in the United States, this aspect of medical practice is of particular interest to him. Regardless of whether he delivers the patient, administers the anesthetic, or both, it is essential that he have adequate knowledge of the various methods of pain relief that are presently available.

In selecting the optimal methods and drugs, it is essential to consider many factors, including the physical and mental status of the mother, the condition of the baby, the presence of obstetric and medical complications, the experience and the practice of the physician performing the delivery, and, most important, the ability and experience of the individual administering the anesthetic. There are many techniques and drugs available that fulfill the requirements of each individual case. Due consideration must be given not only to the advantages of each method but to the disadvantages, the potential hazards and complications.

Relief of pain during the first stage may be effected by psychological preparation of the mother, the use of certain systemic drugs, inhalation analgesic agents, and/or conduction methods. Any of the general or regional anesthetic methods may be used effectively to produce anesthesia during delivery. Proper application of these methods will provide optimal pain relief with minimal or no effects on the mother and infant. However, should the infant's condition be depressed, it is the responsibility of the obstetric team to institute resuscitative measures.

315 S. K St. (5).

V 165
1957

References

1. (*a*) Hingson, R. A., and Hellman, L. M.: Anesthesia for Obstetrics: Labor, Delivery, Infant Care, Philadelphia, J. B. Lippincott Company, 1956. (*b*) Hershenson, B. B.: Obstetrical Anesthesia: Its Principles and Practice, Springfield, Ill., Charles C Thomas, Publisher, 1955. (*c*) Greenhill, J. P.: Analgesia and Anesthesia in Obstetrics, Publication 159, American Lecture Series, monograph in American Lectures in Gynecology and Obstetrics, Springfield, Ill., Charles C Thomas, Publisher, 1952.

2. Bonica, J. J., and Mix, G. H.: Twenty-four Hour Medical Anesthesia Coverage for Obstetric Patients, J. A. M. A. **159**:551-554 (Oct. 8) 1955.

3. Hingson, R. A., and Hellman, L. M.: Organization of Obstetric Anesthesia on 24 Hour Basis in Large and Small Hospital, Anesthesiology **12**:745-752 (Nov.) 1951.

4. Read, G. D.: Childbirth Without Fear: Principles and Practice of Natural Childbirth, New York, Harper & Brothers, 1944.

5. Bonica, J. J.: Drugs of Choice for Relief of Pain, St. Louis, C. V. Mosby Company, to be published, chap. 9.

6. Bonica, J. J.: Management of Pain with Special Emphasis on Use of Analgesic Block in Diagnosis, Prognosis, and Therapy, Philadelphia, Lea & Febiger, 1953.

7. Special Committee on Infant Mortality of Medical Society of County of New York: Resuscitation of Newborn Infants, Obst. & Gynec. **8**:336-361 (Sept.) 1956.

8. Bonica, J. J., and others: Peridural Block: Survey of 3,637 Cases and Review, Anesthesiology **18**:723-784 (Sept.-Oct.) 1957.

COMPARISON OF REGIONAL AND GENERAL ANESTHESIA IN OBSTETRICS

WITH SPECIAL REFERENCE TO TRANSMISSION OF CYCLOPROPANE ACROSS THE PLACENTA

Virginia Apgar, M.D., Duncan A. Holaday, M.D., L. Stanley James, M.B.,
C. Edward Prince, M.D., Irwin M. Weisbrot, M.D.
and
Iris Weiss, B. S., New York

General anesthesia was compared with regional anesthesia as to its effects on mother and fetus in 2,856 vaginal deliveries at term. General anesthesia was used in 2,019 cases, and in 1,022 of these the anesthetic was cyclopropane. Biochemical data were obtained from maternal and fetal blood. In addition, three methods of evaluating the condition of the infant at birth were employed, including a special score based on certain cardiorespiratory and neuromuscular observations. The blood of most infants delivered of mothers receiving cyclopropane contained this gas in demonstrable amounts, but there was no obvious correlation between its concentration and the score noted for the infant. The gas probably induced a mild, readily reversible central narcosis. There was no biochemical evidence that it depressed placentral function, but infants born with the mother under general anesthesia, specifically cycopropane, were more depressed than those born with the mother under regional anesthesia.

During the past eight years, cyclopropane has been found to have many advantages as an obstetric anesthetic agent at the Sloane Hospital for Women. The speed of induction, the quick controllability of depth of anesthesia, and the possibility of ample oxygenation at all times has lead to preference for this agent. In only rare instances cyclopropane has been unsuccessful in relaxing a very tight uterus, which was accomplished by use of chloroform.

On the other hand, Smith [1] suggested a harmful effect of cyclopropane on the infant and Bundesen and co-workers [2] noted an infant death rate following use of this gas three times as high as with any other agent used for obstetric anesthesia. Rovenstine and co-workers [3] found that deep levels of anesthesia induced by cyclopropane in the mother were accompanied by decreased oxygenation of the infant and suggested using the lightest planes of anesthesia.

In view of these discrepancies of attitudes we felt obliged to examine the matter more closely. Regional and general anesthesia were studied clinically during various obstetric situations.

Clinical Data

Four obstetric situations were chosen for review: near-term elective cesarean section, premature vaginal vertex delivery, premature and term breech deliveries, and full-term vaginal vertex delivery.

Elective Cesarean Section.—Cases of elective cesarean section with patients under regional anesthesia, unsupplemented before the birth of the infant, were compared with those with patients under general anesthesia, in this case with cyclopropane. No patients in whom thiopental (Pentothal) induction was used, or to whom a relaxant was given, are included. All the patients were undergoing secondary or tertiary section, or had absolute cephalopelvic disproportion. None was in labor, and none had complications such as toxemia or placenta previa. All patients from 1952 through 1955 who satisfied the above requirements were included. During these four years, there was a change in anesthetic practice, with the trend to increasing the use of spinal anesthesia. Only two patients for whom elective sections were done were anesthetized with cyclopropane in 1955. We were unable to examine a group for whom emergency sections had been done, since spinal anesthesia was rarely chosen, either because of the need for great haste or because of hypovolemia from hemorrhage.

Premature Vaginal Vertex Delivery.—Premature vaginal vertex deliveries, in this clinic, are accompanied by the highest neonatal death rate and thus were chosen for study. Infants under 1,000 Gm. (2.2 lb.) were omitted because of a death rate of 95% irrespective of the anesthetic agent or method. Infants over 2,000 Gm. (4.4 lb.) were so similar to full-term infants in their postnatal behavior and survival that they also were omitted. The weights of the 130 infants in the group chosen for study therefore were from 1,000 to 1,999 Gm.

From the Anesthesiology Service, the Presbyterian Hospital, Sloane Hospital for Women, Babies Hospital and the departments of anesthesiology, obstetrics and gynecology, and pediatrics, Columbia University, College of Physicians and Surgeons. Dr. Prince is a fellow of the Macy Foundation and Dr. Weisbrot is a fellow of the Edan Ros and Public Health Research.

Read before the Section on Anesthesiology at the 106th Annual Meeting of the American Medical Association, New York, June 6, 1957.

Breech Deliveries.—In this clinic 35% of breech deliveries occur prematurely. It is of interest that 90% of the deaths occurring in infants after breech delivery are in this premature group. Cases of version and breech extraction are omitted from these figures because of the need of deeper anesthesia and a relaxed uterus.

TABLE 1.—*Distribution of General Anesthetic Agents in Term Vaginal Vertex Deliveries*

Anesthetic Agent	Vaginal Vertex Deliveries No.	%
Nitrous oxide	916	45.3
Cyclopropane	1,022	50.7
Ethylene	54	2.7
Trichloroethylene	11	0.5
Ether	10	0.5
Chloroform	6	0.3
Total	2,019	100.

As a group for comparison, 2,856 patients who delivered vaginally at term (infants weighing over 2,500 Gm. [5.5 lb.]) during the year 1955, were chosen if they had been anesthetized by a purely regional, or general, method. In 837 cases in which regional anesthesia was used, 10.3% of patients received pudendal block or local infiltration of the episiotomy area, 44.4% received sacral or lumbar epidural block, and 43.0% received spinal anesthesia. The distribution of the 2,019 cases by general anesthetic agents used appears in table 1.

In summary, the cases omitted from this analysis are emergency cesarean sections, version and breech extraction, and premature deliveries of infants under 1,000 and over 2,000 Gm. In addition to these omissions, there may be a bias in the selection of cases. Cyclopropane is more likely to be used for delivery in cases of fetal distress and in other obstetric complications, while regional anesthesia is used when labor is well established and the pelvis is adequate.

TABLE 2.—*Evaluation of Newborn Infant**

Sign	0	1	2
Heart rate	Absent	Slow (below 100)	Over 100
Respiratory effort	Absent	Slow Irregular	Good Crying
Muscle tone	Limp	Some flexion of extremities	Active motion
Response to catheter in nostril (tested after oropharynx is clear)	No response	Grimace	Cough or sneeze
Color	Blue Pale	Body pink Extremities blue	Completely pink

* Method of scoring: 60 seconds after complete birth of infant (disregarding cord and placenta), these five objective signs are evaluated and each given a score of 0, 1, or 2. A score of 10 indicates an infant in the best possible condition.

Three methods of comparison were employed: neonatal (28 days) death rates, scores at birth [4] (table 2), and time to sustained respiration.

With use of neonatal death rates as a criterion, there was no significant difference in any of the four groups between those receiving regional or general anesthesia (table 3).

As an aid to evaluating the condition of an infant in the first few minutes after birth, a scoring system was devised and first used in 1952 [4] (table 2). After experience with over 16,000 scores, based on correlation with mortality, a division was made between those infants receiving scores of 0 to 4 and those of 5 to 10. Those with the lower scores are considered to be potentially sick infants, while those with scores of 5 or higher have a distinctly better prognosis. Examination of the death rates at each score shows a drop from 3.0% death rate at a score of 4 to 1.5% at score 5 (fig. 1). It is true that there is another abrupt drop between score 6 and 7, so that this

TABLE 3.—*Comparison of Neonatal Death Rates with Type of Anesthesia*

Type of Anesthesia	Elective Cesarean Sections No.	NND*	%	Premature Vaginal Vertex Deliveries No.	NND	%	Breech Deliveries No.	NND	%	Vaginal Vertex Full-term Deliveries No.	NND	%
Regional	166	1	0.6	78	11	14.1	98	8	8.17	837	3	.36
General	67	1	1.5	32	5	9.6	284	23	8.10	2,019	5	.25

* NND = neonatal death rate.

division might be used. Recalculating the data in some groups on the basis of including groups 5 and 6 did not result in any change of significance in the groups examined. As will be noted in table 4 and figure 2, the scores of infants in the premature vaginal vertex and breech groups were not significantly different whether the anesthesia was general or regional. However, the scores of full-term infants were significantly better by the chi square test

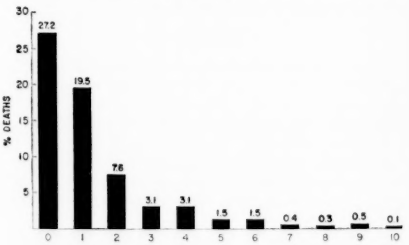


Fig. 1.—Distribution by score of 97 deaths in 6,666 infants from the Sloane Hospital for Women.

($p<0.001$) in both vaginal vertex and elective cesarean section groups, if regional anesthesia was used.

Since 1954, another method of evaluation has been routinely charted. This observation has been termed "time to sustained respiration." Our attempt to use "crying time" and "breathing time" failed to yield useful correlations with morbidity or mortality. The time elapsed until the infant sustains spontaneous respiration is recorded in seconds, after delivery of the entire infant. There were insufficient data in the elective cesarean sections and premature

V 16
1957

vaginal vertex deliveries for comparison of regional and general anesthetic methods. No significant effect of anesthetic technique was observed in relation to breech deliveries (table 5 and fig. 3 and 4). However, the incidence of delayed onset of sustained respiration following full-term vaginal vertex deliveries under general anesthesia was approximately three times greater than under regional ($p<0.001$). A detailed analysis of the TSR's of all full-term vaginal vertex deliveries is presented in table 6. An arbitrary division was made at 150 seconds, and respiration was considered delayed after this time. Respiration was not well established before two-and-a-half minutes in 7% of this group. Of this 7% more than three out of four had received general anesthesia.

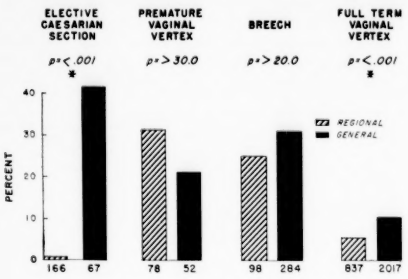


Fig. 2.—Regional versus general anesthesia, scores 0-4.

Biochemical Data

The transfer of cyclopropane across the placenta was studied by manometric analysis of simultaneously drawn samples of maternal and umbilical cord blood for content of cyclopropane at the time of delivery. Twenty-five mothers who received only cyclopropane and oxygen for anesthesia during the second stage of labor were studied.

Blood gas analyses were performed on the Kopp-Natelson microgasometer with use of a modification of the method of Holaday and Verosky.[5] Cyclopropane and dissolved nitrogen were estimated by measurement of the pressure of the residual gas left after absorption of carbon dioxide and oxygen (method as applied to Kopp-Natelson microgasometer to be published[6]). Factors for conversion of manometric pressure differences to volume per cent of cyclopropane were calculated for the micromanometric method using the equation of Van Slyke and Neill.[7] The factors for solubility and rate of reabsorption were from Orcutt and Waters.[8]

Because this method does not allow for distinction between the contributions of nitrogen and cyclopropane to the pressure of the residual gas, experiments were performed on mothers who were breathing air. Fifteen blood specimens of five mothers and their infants were analyzed for residual nitrogen. The average nitrogen content of the specimens of maternal and umbilical cord blood of these patients was 1.2 vol. % (table 7), which is in agreement with Van Slyke and Neill.[7]

Because of the intermittent need for pain relief and because of the indeterminate duration of the second stage of labor, the degree of nitrogen "washout" from the blood and the amount of cyclopropane administered was variable. A study of the rate of nitrogen washout from maternal and fetal blood in a group of six mothers breathing 100% oxygen in a nonrebreathing system for periods of 5 to 60 minutes indicated that the nitrogen content of

TABLE 4.—*Comparison of Scores with Type of Anesthesia*

Scores / Type of Anesthesia	Elective Cesarean Sections* Score of 0-4 No.	%	Score of 5-10 No.	%	Total No.	Premature Vaginal Vertex Deliveries Score of 0-4 No.	%	Score of 5-10 No.	%	Total No.	Breech Deliveries Score of 0-4 No.	%	Score of 5-10 No.	%	Total No.	Vaginal Vertex Full-term Deliveries† Score of 0-4 No.	%	Score of 5-10 No.	%	Total No.
Regional	1	0.6	165	99.4	166	24	30.8	54	69.2	78	25	25.5	73	74.5	98	43	5.1	794	94.9	837
General	28	41.8	39	58.2	67	11	21.2	41	78.8	52	88	31.0	196	69.0	284	210	10.4	1,809	89.6	2,019
Total	29		204		233	35		95		130	113		269		382	253		2,603		2,856

* Expected distribution of scores based on previous experience in 1,319 elective cesarean sections: $\frac{0\text{-}4}{18\%}$ $\frac{5\text{-}10}{82\%}$; $\chi^2 = 60.0$; $p = <0.001$.

† Expected distribution of scores on the above 2,856 cases using null hypothesis: $\frac{0\text{-}4}{9.7\%}$ $\frac{5\text{-}10}{90.3\%}$; $\chi^2 = 37.9$; $p = <0.001$.

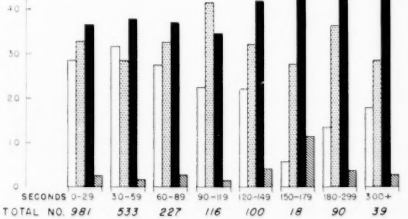


Fig. 3.—Time of sustained respiration in seconds in full-term vaginal vertex presentations.

maternal blood was lowered rapidly during breathing of atmospheres low in nitrogen (table 8 and fig. 5). The nitrogen content of the fetal blood fell slowly and was not significantly altered in 10 minutes of maternal washout. In view of the fact that cyclopropane was usually administered intermittently, with air breathing sometimes allowed between pains, and since the average duration of cyclopropane administrations was approximately 10 minutes, it was estimated that the average concentration of nitrogen remaining in the blood of mothers receiving cyclopropane was 0.6 vol. % and in the umbilical vein blood of the infants of these mothers was 1.2 vol. %. Accordingly, these values were subtracted from the values of total residual gas of maternal and infant blood respectively and the remainder was considered to be cyclopropane.

TABLE 5.—*Time to Sustained Respiration, in Seconds**

	Breech Deliveries, TSR, Sec.†				Vaginal Vertex Full-term Deliveries, TSR, Sec.†				
	0-149		150+		0-149		150+		Total
Type of anesthetic	No.	%	No.	%	No.	%	No.	%	No.
Regional	43	87.8	6	12.2	502	90.6	20	3.4	582
General	126	89.1	15	11.9	1,395	90.9	127	9.1	1,522
Total					1,957		147		2,104

* There were no data on elective cesarean sections or on premature vaginal vertex deliveries.
† TSR = time to sustained respiration.
‡ Expected distribution of TSR on the above 2,104 cases using the null hypothesis: 0-149 / 150+ = 7.1% / 92.9%; $X^2 = 27.2$; $p = <0.001$.

Fig. 4.—Frequency of time of sustained respiration in full-term vaginal vertex presentations.

Two blood sampling procedures were followed. More frequently, a segment of umbilical cord was doubly clamped at the earliest possible moment during delivery and a sample of maternal venous and/or arterial blood was simultaneously drawn. Umbilical venous blood samples were withdrawn from the isolated segment of cord immediately thereafter. In other instances a sample of maternal venous or arterial blood was withdrawn while simultaneously umbilical vein blood was withdrawn with the cord still in situ. Additional samples from infants delivered with the mother under regional anesthesia were collected and their oxygen saturations were compared to the cyclopropane group.

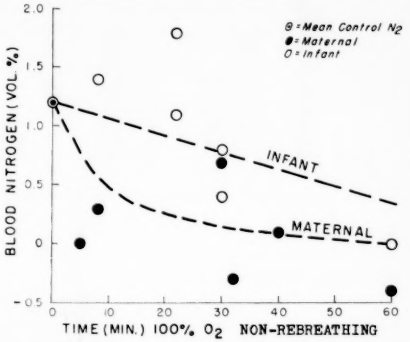


Fig. 5.—Nitrogen washout experiments with use of blood specimens from infant and mother. (Dotted lines are estimations of course of nitrogen washout in mothers and infants. Scatter of data is within error of method ±0.5 vol. %.)

Because of the high solubility of cyclopropane in the usual petroleum base lubricants used for sealing syringes, only syringes lubricated with glycol borate (Aquaresin) were employed. The dead space of the syringes was filled with a concentrated heparin solution. After the sample had been collected, a drop of mercury was introduced into the syringe and constant agitation was begun, first manually and then with motor-driven rotator [5] through a pan of ice water.

TABLE 6.—*Analysis of Time to Sustained Respiration in Full-term Vaginal Vertex Deliveries*

TSR, Sec.	No. of Deliveries	%
0- 29	981	46.7
30- 59	533	25.3
60- 89	227	10.8
90-119	116	5.5
120-149	100	4.8
150-179	18	0.8
180-299	90	4.4
300	39	1.9

Analysis of the blood samples for oxygen, carbon dioxide, residual gas content, oxygen capacity, pH, and hematocrit were performed as soon after sampling as possible, usually within two hours. The majority of oxygen saturations were obtained from the microgasometer analysis.[5] Several blood samples

were analyzed using the double scale cuvette oximeter[9] or the Beckman spectrophotometer.[10] All three methods were standardized against the Van Slyke. The results of analyses for oxygen and carbon dioxide, pH, hematocrit, and buffer-base will be reported elsewhere.[11]

TABLE 7.—*Average Residual Nitrogen Content of Fifteen Blood Samples from Five Mothers and Their Infants*

	Nitrogen Blood Level, Vol. %		
Maternal Artery	Maternal Vein	Umbilical Vein	Umbilical Artery
0.9	...	...	...
1.4	0.5	1.7	1.3
1.0	0.9	0.8	0.8
0.4	...	1.8	1.4
...	1.4	1.6	1.7

$n = 15$
mean = 1.2 vol. %, S.D. = ± 0.45 vol. %.

In the experimental group no specific plan of random selection was adopted. Cases were chosen in relation to the availability of the laboratory facilities. However, there were no cases of fetal distress in this group.

Results

The blood of most infants delivered of mothers receiving cyclopropane contained this gas in demonstrable amounts (table 9). The amount of cyclopropane in umbilical cord blood was usually less than, but proportionate to, the amount in maternal extremity vein blood. The few maternal arterial blood samples obtained during this study suggest that the maternal tissues were not in equilibrium with the concentration of cyclopropane in the blood at the time of sampling. The maternal-fetal gradient was probably greater than shown by the comparison of maternal vein blood and umbilical vein blood.

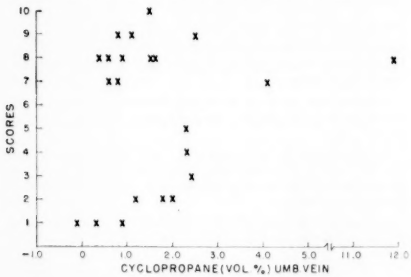


Fig. 6.—Relation of scores to concentration of cyclopropane in umbilical vein.

There was no obvious correlation between the concentration of cyclopropane in the umbilical cord blood and the scores of the infants (fig. 6). Further, no obvious correlation was found between birth oxygenation and score. However, if oxygenation and score be compared in the regional and cyclopropane groups, the latter appears more depressed for a given level of oxygen saturation (fig. 7).

Comment

The clinical study indicates that infants delivered with the mother under general anesthesia are more depressed than those delivered with the mother under regional anesthesia, although the mortality in the two groups is not different. In addition the

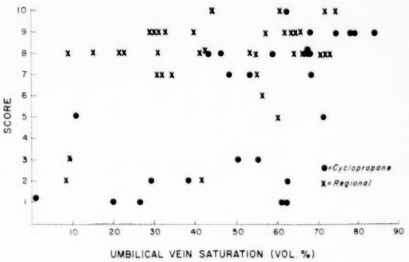


Fig. 7.—Comparison of umbilical vein oxygen saturation and scores.

average depression of infants receiving cyclopropane is significantly greater than is seen when regional or other methods of inhalation anesthesia are used (table 10). If these findings are not due to an inadvertent selection of cases, it remains to be determined whether the gas is exerting a direct narcotic action on the fetus or is depressing the infant by interfering with placental or maternal respiration.

TABLE 8.—*Nitrogen Washout from Maternal and Umbilical Cord Blood in Six Mothers, with 100% Oxygen, Nonrebreathing Technique*

	Nitrogen Blood Level, Vol. %		
Time of Oxygen Administration, Min.	Maternal Vein	Umbilical Vein	Umbilical Artery
5	0.0	...	...
32	−0.3	...	...
30	0.7	0.8	0.4
8	0.3	1.4	...
22	...	1.1	1.8
40*	0.1	...	...
60	−0.4	...	0.0

* Data for same patient as line 4.

The oxygen saturations (table 11) and carbon dioxide tensions[11] of umbilical vein blood in both regional and cyclopropane groups were not significantly different. The pH in the cyclopropane group was 0.07 units higher.[11] These findings argue against the gas interfering with placental function and favor a direct action on the fetus.

In agreement with Rovenstine's study,[3] no correlation between the condition of the infant at birth and the blood level of cyclopropane was demon-

strated. This suggests that some factor other than the anesthetic agent is depressing the infant. However, the blood levels are only of value as an indication of the depth of anesthesia when equilibrium between the blood and tissues has been reached.

TABLE 9.—*Cyclopropane Levels in Maternal and Fetal Blood*

Type of Delivery	Time Cyclo., Min.*	Mat. Artery, Vol. %†	Mat. Vein, Vol. %‡	Umbilical Vein, Vol. %	Umbilical Artery, Vol. %	Score
Vaginal Vertex	15		1.9	0.6		8
Vaginal Vertex	14		1.6			
	15			0.6		7
Vaginal Vertex	4.5		4.1	2.3		5
Cesarean Section	10.0		6.2			
	10.5			2.4		3
Vaginal Vertex	13.0		2.6	1.6		8
Vaginal Vertex	6.5		2.6			
	7.5			0.9		8
Cesarean Section	7.0			0.3		1
	13.25		2.7			
Vaginal Vertex	2.0		2.2			
	4.0			1.2		2
Vaginal Vertex	1.5		1.5	1.5		8
Vaginal Vertex	5.0			0.4		8
	5.5		1.0			
Vaginal Vertex	13.5		1.4	1.1		9
Vaginal Vertex	9.5		2.8			
	10.0			1.8		2
Vaginal Vertex	?		3.3	1.5		10
Vaginal Vertex	7.0			0.8		7
	10.0		1.6			
Vaginal Vertex	8.5		3.4	2.5		9
Cesarean Section	?	6.2		0.9		1
Vaginal Vertex	10.0	5.3		2.0		2
Vaginal Vertex	3.0		8.5	4.1		7
Cesarean Section	17.0		3.0			
Vaginal Vertex	3.0		1.1	−0.1	0.3	1
Vaginal Vertex	1.5		4.4	0.8		9
Cesarean Section	6.0	3.7				5
	10.0		5.9§			
Vaginal Vertex	6.0	8.2				4
Cesarean Section	?	4.5		2.3	0.5	3
Cesarean Section	6	23.0		11.9	6.5	8
n =		6	20	22		24
mean =		8.5	3.1	1.8		5.6
standard deviation =		±7.5	±1.9	±1.9		±3.3

* Time cyclo. = time in minutes from first inhalation of cyclopropane to moment of sampling.
† Mat. Art. = brachial or radial artery.
‡ Mat. Vein = antecubital vein.
§ Uterine vein sample.

Since equilibrium was not reached in this study due to the brief or intermittent periods of administration, little can be inferred from this lack of correlation.

TABLE 10.—*Significance of Difference Between Means*

	t	p
Maternal artery: maternal vein	4.74	<0.001
Maternal vein: umbilical vein	3.06	<0.01
Umbilical vein: control (mean cyclopropane = 0.0 vol. %; n = 4)	5.5	<0.001
Maternal vein: control (mean cyclopropane = 0.0 vol. %; n = 3)	8.8	<0.001
Mean score of infants in cyclopropane group: mean score of all infants (7.6 ± 2.3; n = 12,267)	5.4	<0.001

The immediately apparent explanation for the direct action of cyclopropane on the infants is a mild and readily reversible central narcosis. However, the toxic action of this agent on cardiac muscle,[12] especially in the presence of high tensions of carbon dioxide,[13] is well known. Since in emergency obstetric situations with fetal distress the infant will be both anoxic and hypercarbic, the possibility of some interference with cardiac function should be considered.

Conclusions

In both clinical and biochemical studies infants born with the mother under general anesthesia, and specifically cyclopropane, were more depressed than those born with the mother under regional anesthesia. Cyclopropane is transferred rapidly to the fetus, but as used clinically in this study equilibrium with the mother was not reached. There was no biochemical evidence that cyclopropane depressed placental function. This suggests that the gas exerted a direct narcotic action on the fetus, despite the absence of correlation between the blood concentration of the gas and the condition of the infant at birth. Toxic action of cyclopropane in relation to the low oxygen and high carbon dioxide levels normally present at birth is possible.

TABLE 11.—*Scores and Umbilical Cord Oxygenation*

Type of Anesthesia and Type of Delivery	Av. Score	No.	Umbilical Vein, % Saturation	No.	Umbilical Artery, % Saturation	No.	Maternal Artery, % Saturation	No.
Cyclopropane, vaginal	5.9	22	55	22	5	4	97	5
Regional, vaginal	8	14	51	14	21	13	97	4
Cyclopropane, section	5.4	5	49.2	5	23	5	96	5
Regional, section	7.6	26	46.4	26	16	23	97	18

622 W. 168th St. (32) (Dr. Apgar).

This investigation was supported by a research grant from the National Institutes of Health, Public Health Service.

References

1. Smith, C. A.: Effect of Obstetrical Anesthesia upon Oxygenation of Maternal and Fetal Blood with Particular Reference to Cyclopropane, Surg. Gynec. & Obst. **69:**584-593 (Nov.) 1939.

2. Bundesen, H. N., and others: Progress in Prevention of Needless Neonatal Deaths, Annual Report, Chicago Board of Health, 1951.

3. Rovenstine, E. A.; Adriani, J.; and Studdiford, W. E.: Gas Changes in Maternal and Fetal Blood During Cyclopropane Obstetric Anesthesia, California & West. Med. **53:**59-64 (Aug.) 1940.

4. Apgar, V.: Proposal for New Method of Evaluation of Newborn Infant, Anesth. & Analg. **32:**260-267 (July-Aug.) 1953.

5. Holaday, D. A., and Verosky, M.: Improved Micromanometric Methods for Analysis of Respiratory Gases in Plasma and Whole Blood, J. Lab. & Clin. Med. **47:**634-644 (April) 1956.

6. Holaday, D. A.: Unpublished data.

7. Van Slyke, D. D., and Neill, J. M.: Determination of Gases in Blood and Other Solutions by Vacuum Extraction and Manometric Measurement, J. Biol. Chem. **61:**523-573 (Sept.) 1924.

8. Orcutt, F. S., and Waters, R. M.: Method for Determination of Cyclopropane, Ethylene, and Nitrous Oxide in

V 165
1957

Blood with Van Slyke-Neill Manometric Apparatus, J. Biol. Chem. **117**:509-515 (Feb.) 1937.

9. Groom, D.; Wood, E. H.; Burchell, H. B.; and Parker R. L.: Application of Oximeter for Whole Blood to Diagnostic Cardiac Catheterization, Proc. Staff Meet. Mayo Clin. **23**:601-609 (Dec. 22) 1948.

10. Holling, H. E.; Macdonald, I.; O'Halloran, J. A.; and Venner, A.: Reliability of Spectrophotometric Method of Estimating Blood Oxygen, J. Appl. Physiol. **8**:249-254 (Nov.) 1955.

11. James, L. S., and others: Acid-Base Status of Human Infants in Relation to Birth Asphyxia and Onset of Respiration, J. Pediat., to be published.

12. Robbins, B. H., and Baxter, J. H., Jr.: Studies of Cyclopropane: III. Relation of Electrocardiographic Changes to Arterial Concentration of Oxygen, Carbon Dioxide, and Cyclopropane in Dogs Anesthetized with Cyclopropane, J. Pharmacol. & Exper. Therap. **61**:162-174 (Oct.) 1937.

13. Johnstone, M.: Cyclopropane Anesthesia and Ventricular Arrhythmias, Brit. Heart J. **12**:239-244 (July) 1950.

PEDIATRIC CONTRIBUTIONS TO NEUROLOGY

M. G. Peterman, M.D., Milwaukee

Pediatrics is concerned with the whole child, his mental and physical development and the influence and effect of his environment. The pediatrician has of necessity become his own best neurologist. Very few neurologists have been interested in pediatrics. There is no doubt of course but that the neurologist who is interested and who will devote the additional time and patience necessary for the examination of a child will be in a position to offer assistance in diagnosis. Some time ago a prominent neurologist addressed the American Academy of Pediatrics and made the gratuitous suggestion that pediatricians should develop an interest in convulsions and epilepsy. Apparently he was not familiar with the literature, which is replete with studies, reports, and even books by pediatricians on convulsions.

The first distinct treatise on pediatrics was published by Pietro Bagellardo in 1472. It contained a chapter on epilepsy. At about the same time, 1497, Metlinger published a pediatric treatise in which he considered hydrocephalus, meningitis, insomnia, convulsions, paralysis, and strabismus along with other diseases. Austrius published Roelants' book in 1540. This book, considered the outstanding pediatric contribution of the 16th century, contained articles on night terrors, epilepsy, paralysis, infantile convulsions, and incontinence. Mercuriali published a pediatric treatise in 1584, in which he discussed epilepsy and stammering, as well as disordered speech, mutism, and disorders of sensation.

The next studies on the clinical disorders of infancy and childhood were reported in 1773 in Leipzig. In 1811 the French published a series of essays from the first children's hospital which was established in Paris. John Clark in 1815 published his commentaries on some of the most important diseases of children. He featured particularly convulsions, idiocy, paralysis, and epilepsy. Valleix, an intern at the Children's Hospital in Paris, published a treatise on neuralgia in 1841. Charles West, one of the greatest of the early English pediatricians, published a treatise in 1848, which was translated into almost every European language, as well as Arabic. It includes an excellent lecture on diseases of the brain and nervous system.

Gebhardt's "Handbuch der Kinderkrankheiten" was published in 1857 and presented the most important information on pediatrics available at that time. It was exceeded only by Pfaundler and Schlossmann's "Handbuch der Kinderkrankheiten" in 1906. Among the supplementary volumes to the latter there is one on nervous diseases. In the second half of the 19th century the leadership in pediatrics thus passed to the Germans. Neurath made his contribution on the cerebral palsies in 1869. Soltmann reported studies on infantile neurology in 1875. Mauthner von Mauthstein of Vienna presented several treatises on diseases of the brain and

The neurology of children has been an important phase of pediatrics from the beginning. Pediatricians as early as the 15th century were much concerned with diseases like epilepsy and meningitis, and symptoms like convulsions, strabismus, and incontinence were considered in early textbooks. The contributions of pediatricians to knowledge of the nervous system since that time have been numerous and important.

Chairman's address, read before the Section on Pediatrics at the 106th Annual Meeting of the American Medical Association, New York, June 5, 1957.

spinal cord in children in 1844. Ritter von Rittershain, a brilliant pediatrician from Lemberg who had epilepsy himself, presented his graduation thesis on this disease in 1888. Unger of Hungary reported on cortical epilepsy in 1886 and diffuse insular sclerosis in 1887. Trousseau of Tours described his diagnostic sign in infantile tetany in 1831. He lectured on many pediatric diseases, including infantile convulsions. Parrot, a professor of pediatrics in Paris, described his pseudoparalysis in 1872 and also described other diseases of the brain in infancy. Henry Ashby of Manchester established the first residential school for epileptic children in 1900. In 1910 von Bokay described surgical treatment for hydrocephalus. Pfaundler described spinal puncture in children in 1899. Ibrahim made extensive studies in the nervous diseases of childhood and reported on them in 1911. Treatises on nervous diseases were published by pediatricians as follows: C. Pavone in 1892; B. K. Rachford in 1905; M. Thiemich and F. Zappert in 1910; and G. Peritz in 1912.

Reflexes

Among the important reflexes of great value in pediatrics, the first is probably the facial phenomenon of Chvostek. This reflex properly elicited indicates hyperirritability of the seventh nerve. Pediatricians, beginning with vander Elst, in 1925, have directed attention to the fact that the seventh nerve should be tapped near its point of origin from the temporomandibular foramen just below the zygoma. When the cheek is tapped anywhere between the angle of the mouth and the external auditory meatus, it is often possible to obtain a reflex which is an indication of hyperirritability of the facial branch of the fifth nerve. A true Chvostek sign indicates mechanical irritability of the seventh nerve and in children is almost pathognomonic of tetany due to calcium deficiency. At times, tapping anywhere on the cheek will elicit a marked response of the entire facial muscles on the side stimulated. It is fairly common to obtain a positive facial reflex in the nervous or hyperexcitable child.

Lust, a pediatrician, described in 1920 the peroneal reflex obtained by tapping the peroneal nerve where it crosses the head of the fibula. This reflex is much easier to obtain and more reliable than the Chvostek. Binder, in 1903, first described the shoulder reflex, which is a useful diagnostic aid in tubercular meningitis. If the head is rotated to one side, the opposite shoulder will be elevated and will remain elevated until the head is rotated back to the midline. Moro, in 1914, described the embrace reflex. If the normal newborn infant is suddenly startled by rattling of the bed or striking of the mattress, if his position is suddenly lowered while he is held horizontally, or if both upper extremities are extended and suddenly released, he will often clasp his upper extremities in the embrace reflex and then cry. This reflex disappears in about three months. It has its greatest value when it appears unilaterally while the contralateral extremity remains flaccid.

Convulsions

Convulsions have always been considered a major symptom in childhood. Pediatricians have covered the subject well. Brechek published a handbook on convulsions in childhood in 1824. In 1924 a definition was proposed for idiopathic or essential epilepsy and the ketogenic diet was introduced for treatment by a pediatrician. In 1931 the first moving pictures of the various types of convulsions in childhood were made by a pediatrician. In 1932 the first complete classification of convulsions in childhood based on the largest series of cases completely studied was presented. Herlitz in 1941, Zellweger in 1948, Bridge in 1949, and Livingston in 1954 all published books on the convulsive diseases. In these may be found the literature of pediatric contributions to the subject. In 1950 James Hughes began the most complete study of electroencephalography in infants and children by a pediatrician. He has established the norms and the many variations. From this it may be seen that we need not be modest about the pediatric contributions to neurology.

411 E. Mason St. (2).

V 16
1957

Circulatory Effects of the Sitting Position.—The prolonged sitting position occasions a degree of dependency stasis that may result in the rapid development of a quiet type of thrombosis in the deep veins of the calf. From this, a propagation of clot and pulmonary embolism may immediately follow. . . . The rhythmic forward, pulsatile motion of the foot, often noticed when one knee is crossed over the other, shows that the popliteal artery of the crossed leg is likely to be compressed in this position and warns that it may be a cause of venous stasis as well. Such matters are important enough to suggest the advisability of making movements of the toes, feet and lower legs when one is sitting for long periods and of getting up and exercising when opportunity offers. The right leg seems more susceptible than the left. There is evidence that persons over fifty years of age should have this particularly in mind and that physicians should be alert to recognize the significance of lameness after airplane flights, automobile trips and other occasions of a prolonged seated position.—John Homans, M.D., Thrombosis of the Deep Leg Veins Due to Prolonged Sitting, *The New England Journal of Medicine*, Jan. 28, 1954.

PRESENT-DAY TREATMENT OF TUBERCULOSIS AND PREGNANCY

George Schaefer, M.D., Stanley J. Birnbaum, M.D.
and
R. Gordon Douglas, M.D., New York

The incidence of tuberculosis complicating pregnancy at the New York Lying-In Hospital has remained between 1.5 and 2.0% of all antepartum admissions and is similar to previous studies covering 1933-1951. Modified bed rest is advised during pregnancy and complete bed rest is no longer used as the sole treatment for pregnant patients with tuberculosis. Definitive therapy for tuberculosis has been given; antimicrobial drugs were used in 37% of pregnant patients and major thoracic surgery in 11%, compared to 1% and 2%, respectively, in our previous series. The management of delivery in the patient with tuberculosis should be individualized. The labor and delivery should be made as easy as possible and heavy sedation and unnecessary operative interference should be avoided. Preference is for regional anesthesia for delivery in the tuberculous patient.

In a previous paper on the obstetric management of the tuberculous patient, we reported the results in patients with this complication of pregnancy at the New York Lying-In Hospital from 1933 through 1951.[1] Marked changes have occurred in the treatment of the tuberculous patient since the advent of antimicrobial therapy and excisional surgery, and experience with antimicrobial drugs in pregnant patients with tuberculosis was somewhat limited prior to 1952. We are now able to report on our experience with those patients who were delivered of infants at term or prematurely from January, 1952, through December, 1956. In 255 patients, during the five-year period, there were 298 deliveries of 301 infants; 3 patients had twins, 41 patients had two deliveries, and 1 patient had three deliveries. With the exception of a few private patients treated by other members of the staff, all patients were treated by us in conjunction with the phthisiologists. Follow-up of patients with inactive tuberculosis was done in the outpatient obstetric-pulmonary clinic, whereas patients with active disease or those in whom the status of the disease was questionable were admitted to the obstetrics floor, where there are facilities for evaluation and treatment. Thus pregnant patients with tuberculosis remain under our care not only during pregnancy but also for at least three months after delivery, when they are transferred to the medical or pulmonary service for further treatment.

Extent of Tuberculosis

The incidence of tuberculosis complicating pregnancy at the New York Lying-In Hospital has remained between 1.5 and 2.0% of all antepartum admissions. This figure is similar to that reported in our previous study and indicates that in our obstetrics clinic the incidence of this disease has not been decreasing.

In 47 patients, tuberculosis was first discovered during pregnancy; in the remainder, it was known to exist before the onset of pregnancy. Twenty-one patients in the former group had active tuberculosis and were treated with drugs; there were 22 deliveries among these women. The remaining 26, who had 31 deliveries, were carefully observed but not treated; 24 of these patients had minimal disease discovered on routine roentgenogram. Apparently their lesions had healed before the onset of pregnancy. Sputum and gastric specimens were negative on repeated examinations, and serial roentgenograms of the chest showed no progression of the disease before or after delivery. All except three of this group of patients with inactive tuberculosis were followed for at least three months post partum, and no change in their pulmonary condition was noted. In 2 of these 26 patients, definite bacteriological evidence of activity could not be proved, nor were roentgenograms of the lungs during gestation conclusive. Both patients were seen late in pregnancy, when a sufficient period of observation before delivery was not possible. After delivery a positive culture was obtained in each patient; one patient was transferred to a tuberculosis hospital, where she was treated with drugs and improved, and the second signed herself out of the hospital against advice.

The type and extent of tuberculosis in our patients at the time of delivery in the past five years (1952-1956) was as follows: In 47 deliveries of 47 patients (16%), active tuberculosis was present at the time of delivery; the disease was minimal in 13 cases, moderately advanced in 27, and far advanced in 7. (In two patients who had major thoracic surgery before delivery, the disease progressed after delivery. Six additional deliveries occurred in this group of 47 patients while the disease was inactive.) At the time of delivery in 251 cases (84%), the disease was inactive. It was

From the Department of Obstetrics and Gynecology of the Cornell University Medical College and the New York Lying-In Hospital.

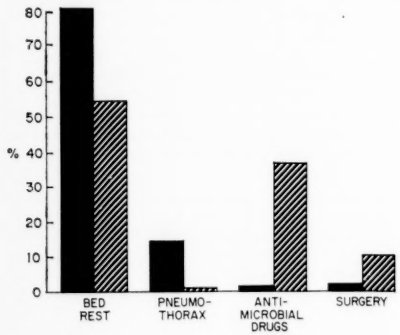
Read before the Section on Obstetrics and Gynecology at the 106th Annual Meeting of the American Medical Association, New York, June 7, 1957.

minimal in 172 instances, moderately advanced in 66, and far advanced in 13. The figures in our previous study were 12% for the group with active tuberculosis and 88% for the "inactive" group.

Treatment of Tuberculosis

In the figure, we have compared the types of treatment that the patients received in the years 1933-1951 and 1952-1956. Management and care of patients in the two periods is discussed below.

Modified Bed Rest.—Of the tuberculous patients who gave birth in the years 1952-1956, 54% received no treatment other than modified bed rest. These women, although ambulatory, were advised to lie down for several hours during the afternoon and to avoid overexertion. It should be emphasized that more specific treatment for this group was not considered necessary since in most instances the disease had had its onset approximately five years before the pregnancy and had remained inactive



Type of treatment given in tuberculosis and pregnancy, 1933-1951 (black bars) and 1952-1956 (striped bars).

during gestation. However, the condition of all of these patients was followed with routine chest roentgenograms and sputum or gastric analyses during their antepartum course. In our previous series, 407 patients, or 80%, were treated solely by bed rest. Of these 407 patients, 355 were known to have had tuberculosis which was treated before the onset of their pregnancy. In that era, treatment consisted essentially of long periods of bed rest.

For many years bed rest was considered the basis for all treatment of tuberculosis. Hirsch and others [2] state that prior to the introduction of effective chemotherapy this feeling was perhaps warranted. However, he and his co-workers at the Rockefeller Institute have recently conducted controlled tests which show that bed rest is not as important a factor in the treatment of moderately advanced and far advanced relatively fresh pulmonary tuberculosis in adult women as it was before the introduction of effective chemotherapy. Mitchell [3] has called attention to the fact that recurrences took place in 27.6% of the 589 patients with minimal pulmonary tuberculosis who had been followed for periods up to 20 years and who received bed rest as the only treatment. While bed rest is still advised during the acute phase of the disease, its duration has been greatly shortened and it is seldom if ever used as the sole method of treatment. This pertains to the pregnant as well as to the nonpregnant patient.

Pneumothorax.—In our 1933-1951 series, pneumothorax, pneumoperitoneum, and phrenic crush were used in 71 patients, or 14%. Pneumothorax in particular was an accepted and frequent method of collapse therapy at this time and was initiated or continued during the pregnancy. With the advent of chemotherapy and major thoracic surgery, pneumothorax as a method of therapy has almost completely disappeared. During the period 1952-1956, pneumothorax was attempted on two occasions. In only one case was it continued, and in this patient streptomycin and aminosalicylic acid (PAS) were also given. In five patients pneumothorax had been induced elsewhere shortly before conception and was continued during the pregnancy. In 28 patients it had been given many years before pregnancy and had been completed. At the present time, pneumothorax is not used in our patients as collapse therapy during pregnancy.

Antimicrobial Therapy.—Among the 98 patients who received antimicrobial therapy before, during, or immediately after gestation, there were 110 deliveries. These comprised 37% of the deliveries that occurred from 1952 through 1956, while only 1% of deliveries in the previous series were in patients who received such therapy. The drugs used were streptomycin or dihydrostreptomycin, aminosalicylic acid, and isoniazid. The dosages and combinations of these drugs were identical to those used in nonpregnant patients and have been described elsewhere.[4] No untoward effect from these drugs was noted in the mother or newborn infant. Occasionally, however, a pregnant patient could not tolerate aminosalicylic acid and it was necessary to decrease the dosage, discontinue its use for several days, or substitute another drug. The fact that no deleterious effects were noted is emphasized because some writers formerly warned that streptomycin might affect fetal development if given to the mother during the first half of gestation. Sufficient clinical material on the dosage used today is now available, and reveals no apparent deleterious effect on the fetus from streptomycin, aminosalicylic acid, or isoniazid.

Antimicrobial drugs were used under the following circumstances: before onset of pregnancy, in 38 deliveries; during pregnancy, in 36; with major thoracic surgery, in 27; and immediately after delivery, in 9. Thus, they were used in a total of 110 deliveries.

V 165
1957

Patients Receiving Anitmicrobial Drugs Before Onset of Pregnancy: There were 38 deliveries in 32 patients who had received antimicrobial drugs from one to five years before the onset of pregnancy. In all but two of these the disease was considered inactive at the onset of pregnancy and at the time of delivery. In two patients antimicrobial therapy had been started recently and the disease was considered active. In six patients pregnancy occurred when the course of therapy was about to be terminated, and, in these, administration of drugs was continued during the entire pregnancy and for six months after delivery. An example of a case in which the patient received drugs before the onset of pregnancy is given in the abstract below.

Case 1.—A 35-year-old patient registered in the antepartum clinic in August, 1955. She had first been given a diagnosis of pulmonary tuberculosis in 1951, at which time her disease was moderately advanced. At that time she was treated with bed rest for one year and streptomycin, 1 Gm. three times a week, and aminosalicylic acid, 12 Gm. daily, for two years. Her antepartum course was unremarkable; repeated chest roentgenograms showed no change in her pulmonary condition, and three gastric analyses were negative for tubercle bacilli. On Jan. 8, 1956, she had a full-term, normal, spontaneous delivery of a 4,250 Gm. (9 lb. 6 oz.) male infant after a five-hour labor. She received meperidine and phenobarbital sodium for analgesia, and pudendal block at the time of delivery. Follow-up in November, 1956, revealed her condition to be unchanged and good.

Patients First Discovered to Have Tuberculosis During Pregnancy: In 21 patients, active pulmonary tuberculosis was first discovered during pregnancy. (One patient had two deliveries.) Usually the diagnosis was suspected on the basis of a routine roentgenogram taken at the first antepartum visit and was checked with a 14-by-17-in. chest roentgenogram. In all instances sputum or gastric analyses were positive for tubercle bacilli before treatment was begun. At the time of its recognition, the tuberculosis was diagnosed as "minimal" in 6 patients, "moderately advanced" in 14 patients, and "far advanced" in 1 patient. Tuberculosis was diagnosed in the first trimester in 5 patients, in the second trimester in 10 patients, and in the third trimester in 6 patients.

Most of the patients found to have active tuberculosis during pregnancy were discovered in our own antepartum clinic. A few patients were referred from other hospitals when they were found to be pregnant in the course of a tuberculosis examination. As soon as active tuberculosis was diagnosed, the patient was hospitalized and antimicrobial therapy was started. Following is the case history of a patient who was given the diagnosis of tuberculosis during pregnancy.

Case 2.—This 32-year-old woman was transferred from a tuberculosis hospital to the New York Lying-In Hospital in January, 1953, in the 26th week of pregnancy. In September, 1952, she had been found to have moderately advanced, active tuberculosis on the basis of a chest roentgenogram and positive sputum. Administration of isoniazid, 300 mg. daily, and aminosalicylic acid, 12 Gm. daily, was started in October, 1952, and streptomycin, 1 Gm. a day for 14 days and then 1 Gm. twice weekly, was added in January, 1953. Modified bed rest was continued on our obstetrics floor. On March 27, 1953, the patient had a normal, spontaneous delivery of a 3,070 Gm. (6 lb. 12 oz.) male infant after a six-hour labor. She received phenobarbital sodium and meperidine for analgesia, and no anesthesia. She was returned to the tuberculosis hospital in April, 1953, and was discharged from there in May, 1954, with her disease considered arrested, and advised to continue taking her antimicrobial drugs.

She was next seen in our antepartum clinic in May, 1955, in her 22nd week of gestation. Although her disease was now considered inactive, she was still taking her antituberculosis drugs and it was deemed advisable to continue their use throughout this pregnancy and for several months post partum. In August, 1955, after a five-hour labor, she had a normal spontaneous delivery of a 3,180 Gm. (7 lb.) female. She received no analgesia and a few whiffs of nitrous oxide at the time of delivery. She was discharged a week after delivery and was seen in November, 1955, at which time her condition was good.

Patients Discovered to Have Active Disease After Delivery: There were seven patients (nine deliveries) in whom a diagnosis of activity, or questionable activity, of an old tuberculous lesion was made after delivery. In seven instances the original diagnosis of pulmonary tuberculosis had been made 10 years or longer before the present delivery, and in two patients, 4 years before delivery Diagnosis was made on the basis of serial roentgenograms or on the finding of tubercle bacilli in sputum or gastric washings. Case histories of two patients of this type follow.

Case 3.—This 39-year-old woman was given a diagnosis of moderately advanced pulmonary tuberculosis in 1946. She was treated with bed rest for 18 months. When she registered in the antepartum clinic of the New York Lying-In Hospital in January, 1952, roentgenographic examination showed no change from her previous condition. Sputum examinations were negative on three occasions. In May, 1952, she had a full-term forceps delivery of a 3,490 Gm. (7 lb. 11 oz.) male infant, while she was under pudendal block anesthesia, after a seven-hour labor. While the patient was in the hospital, a sputum culture taken six weeks previously was reported as positive for tubercle bacilli. She was started on therapy with streptomycin and aminosalicylic acid and transferred to a tuberculosis sanatorium in August, 1952. She was kept at the sanatorium until May, 1953, and continued taking antituberculosis drugs for six months after discharge, for a total of 18 months. Follow-up in 1954 showed her to be improved.

Case 4.—This patient's condition was diagnosed as far-advanced tuberculosis in 1942. She refused treatment for her tuberculosis but sought medical care for two therapeutic abortions in 1942 and 1951, signing herself out of the hospital immediately after each abortion was performed. In March, 1952, she had a normal spontaneous delivery of a 3,720 Gm. (8 lb. 3 oz.) female infant. Sputum culture was reported as positive after her delivery and discharge from the hospital. She was induced to return to the hospital to start treatment with streptomycin and aminosalicylic acid. This was begun in June, 1952, and continued until October, 1953, when a pneumonectomy on the left was performed. Isoniazid therapy was started after the operation and all chemotherapy continued for 18 months thereafter. The most recent follow-up (January, 1957) showed her condition to be improved.

Although we considered this patient to have a progression of her disease after delivery, her disease was probably active before and during pregnancy as it had been intermittently for 11 years.

Major Thoracic Surgery.—Major thoracic operations were performed on 29 patients before or during gestation. Three of these patients delivered on two occasions, making a total of 32 deliveries, or 11% of the deliveries from 1952 through 1956. In our previous series 2% of the patients had major thoracic operations.

Results After Delivery

Follow-up examinations were made, and the results were as follows: After 11 of the deliveries (3.7%), the disease was found to have progressed—in 2 cases in less than 3 months, in 3 in 3 to 12 months, and in 6 in over a year. After 256 (85.9%) of the deliveries, no change was found in disease status in the course of the follow-up—62 in less than 3 months, 82 in 3 to 12 months, and 112 in over a year. After 31 deliveries the condition of the patients was found to be improved—in none in less than 3 months, in 10 in 3 to 12 months, and in 21 in over a year. Further details are given below.

Progression of Tuberculosis After Delivery.—In 11 cases, or 3.7%, tuberculosis progressed after delivery. In two there was progression after major thoracic operations which had been performed four and five years, respectively, before delivery. There were also two patients whose disease was discovered during pregnancy and who were found to have positive sputum cultures after delivery. In seven patients known to have tuberculosis many years before the onset of pregnancy, positive sputum was obtained after delivery. None had received treatment with chemotherapy or major surgery before pregnancy. These patients had had positive sputums on occasions in the past but none had been obtained during the pregnancy.

While we considered these patients to have shown a progression of tuberculosis after delivery, the course of the disease was probably progressive before and during the pregnancy and not particularly related to it. Six of these patients were treated post partum with chemotherapy and the seventh with both chemotherapy and surgery. All of these patients showed improvement after treatment.

No Change in Condition After Delivery.—In 256 cases, or 85.9%, there was no demonstrable change in the lesion after delivery. The majority of this group were considered to have inactive disease, and a number had more than one delivery. In some of these patients the disease had been active during a previous pregnancy but was inactive in the pregnancy under consideration. A few patients seen late in pregnancy had active disease before and after delivery, were treated immediately after the diagnosis was made, and subsequently improved. However, their condition immediately after delivery was unchanged from that before delivery and they were therefore classified as showing no change.

Improvement After Delivery.—In 31 cases, or 10.4%, the patients showed improvement after delivery as compared to their condition when first seen. Major surgical procedures were performed on three of these during pregnancy; a fourth was operated on immediately post partum; a fifth had had surgery three years before delivery but was found to have active disease during her pregnancy. This last patient was given antimicrobial therapy and improved. Eighteen patients who were first found to have an active lesion during gestation were treated with antimicrobials and improved. Two of these patients also had lobectomies performed 8 and 15 months post partum respectively.

Eight patients known to have active tuberculosis before conception were found to have active disease during pregnancy. They were given antimicrobial therapy and improved. One patient had a segmental resection eight months after delivery.

Management of Labor

Analgesia.—For many years we have emphasized that use of narcotic doses of such drugs as morphine and scopolamine must be avoided in tuberculous patients, particularly those with active or recently arrested disease. This is important because these drugs tend to abolish or greatly diminish the cough reflex and the function of voluntary expectoration. Stasis of pulmonary secretions caused by diminution of the cough reflex may lead to the development of new areas of infection within the lung. In our current series, only 1% of the patients received morphine or morphine and scopolamine, compared to 37% in the previous series. Eleven per cent of our recent series received scopolamine, compared to 37% in the older series. Upon our recommendation 75% of our patients were given meperidine alone or with pentobarbital sodium for analgesia. Only 13% in the years 1933-1951 received the latter drugs.

Anesthesia.—Local infiltration or pudendal block alone or with a few whiffs of nitrous oxide or cyclopropane was used in 62% of the cases in our recent series, compared to 45% from 1933 through 1951. General anesthesia alone was used in 25% of our recent series and in 40% of the older series. Ether alone was not used in any patient in our recent series, although it was used in 16 patients in the older series. Because of the high percentage of oxygen that can be used with it, cyclopropane was used in 18 patients in our present series, and it is the drug of choice in the tuberculous patient when a general anesthetic is necessary. Our preference, however, is for regional anesthesia for delivery in the tuberculous patient.

V 16
1957

Type of Delivery.—The management of delivery in the patient with tuberculosis should be individualized. Our purpose is to make the labor and delivery as easy as possible and to avoid heavy sedation and unnecessary operative interference. The types of deliveries that our patients had were as follows: normal spontaneous delivery, 184 (62.0%); low forceps, 75 (25.0%); low mid-forceps, 19 (6.4%); breech, 11 (3.6%); and cesarean section, 9 (3.0%).

We permit normal spontaneous delivery in our patients if labor is progressing satisfactorily. Forceps are employed more frequently than in the patient without complications to avoid a prolonged second stage and to preclude excessive straining. Our incidence of cesarean section among these patients, 3%, is slightly less than our over-all clinic incidence, and all these operations were done for obstetric indications. We have on occasion performed a cesarean section with use of local anesthesia in patients who have active or recently arrested tuberculosis rather than subject the patient with borderline cephalopelvic disproportion to a prolonged trial of labor. We did not, however, find it necessary to do this in the current series.

Summary and Conclusions

The incidence of tuberculosis in pregnancy has remained constant over the years 1952-1956 and is similar to that in our 1933-1951 series. Although complete bed rest is no longer used as the sole treatment for the pregnant patient with tuberculosis, modified bed rest is still advised during pregnancy. Pneumothorax is no longer used as a means of collapse therapy in the pregnant patient with tuberculosis, except on rare occasions. It was used in 0.6% of the patients in our present series, compared to 14% in the previous series. Antimicrobial therapy was used in 37% of our patients, compared to 1% in the previous series. With the drugs used in the dosages recommended, no untoward effects in mother or infant were noted. In the 1952-1956 series major thoracic surgery was performed in 11% of our patients before or during pregnancy, compared to 2% in the previous series. The present trend is toward excisional surgery (lobectomy, pneumonectomy, or segmental resection) rather than collapse procedures (thoracoplasty). Surgery may be performed during pregnancy, although this is not frequently indicated. In 3.7% of cases there was a progression of disease after delivery. In 86% there was no change, and in 10% there was improvement.

Excessive analgesia and anesthesia should be avoided in the tuberculous patient. Meperidine and pentobarbital sodium have been used with success in our patients. Local infiltration and pudendal block are preferred for anesthesia. Vaginal delivery, with use of forceps to shorten the second stage when indicated, is our method of delivery. Cesarean section occasionally may be employed to avoid prolonged and traumatic delivery.

Addendum

Since the dosage of roentgens delivered with the conventional 14-by-17-in. chest x-ray is one-fiftieth of that delivered by the usual screening photofluorograph, we have discontinued routine photofluorographs in our antepartum clinic and now use the conventional 14-by-17-in. chest x-ray.

98-11 Queens Blvd., Forest Hills, L. I., N. Y. (Dr. Schaefer).

References

1. Schaefer, G.; Douglas, R. G.; and Dreishpoon, I. H.: Obstetric Management of Tuberculosus Patient, Obst. & Gynec. **1**:245-256 (March) 1953.

2. Hirsch, J. G.; Schaedler, R. W.; Pierce, C. H.; and Smith, I. M.: A Study Comparing Effects of Bed Rest and Physical Activity on Recovery from Pulmonary Tuberculosis, Am. Rev. Tuberc. **75**:359-409 (March) 1957.

3. Mitchell, R. S.: Late Results of Modified Bed Rest in Active Uncomplicated Minimal Pulmonary Tuberculosis, Am. Rev. Tuberc. **67**:401-420 (April) 1953.

4. Schaefer, G.: Tuberculosis in Obstetrics and Gynecology, Boston, Little, Brown & Company, 1956, pp. 29-34.

Rehabilitating the Aged.—The greatest obstacle in the way of establishing rehabilitation services in hospitals is the critical shortage of professional personnel. Although the need for trained professionals extends along the entire roster of medical and paramedical specialists . . . I will briefly touch only on the need for specially trained physicians. . . . The most pressing shortage exists in specialists in physical medicine and rehabilitation, psychiatry, public health, and administrative medicine. All these specialties are vitally important in the care of the aging. This simple fact indicates one of the important aspects of the difficulties in medical care of the aging. I wish to emphasize, however, that with the cooperation of all concerned, in the first place the medical profession, all these problems can be solved. The majority of the medical profession has long ago abandoned its initial reservation towards rehabilitation and accepted it as full partner in the total effort of the service to the sick. If this acceptance could be emphasized in the field of the medical care of the elderly, these often neglected people would enjoy a great many new benefits.—H. A. Rusk and M. M. Dacso, Rehabilitation in the Aged, from the 28th Annual Graduate Fortnight on Problems of Aging, *Bulletin of the New York Academy of Medicine,* October, 1956.

TREATMENT OF VENTRICULAR SEPTAL DEFECTS

Earle B. Kay, M.D., Mohinder P. Sambhi, M.D., Cid Nogueira, M.D.
and
Henry A. Zimmerman, M.D., Cleveland

Experience with congenital defects of the interventricular septum has shown that the prognosis is poor if the defect and associated shunt flow are large, both ventricles are enlarged, and the pressures in right ventricle and pulmonary artery are elevated. The pressures found by catheterization are an important criterion of operability. Direct-vision closure of ventricular septal defects was carried out by means of a pump-oxygenator in 22 cases. There has been no operative mortality among the 16 patients whose right ventricular pressures had been below 80 mm. Hg. The six patients who died had an average right ventricular pressure of 95.6 mm. Hg. The best time for closure is when there still is a large left-to-right shunt, with the electrocardiogram showing evidence of diastolic overloading of the left ventricle. Operations correctly timed, in patients with low right ventricular pressures, carry the minimum risk.

In only a few short years opinion as to the significance of a ventricular septal defect has changed. The medical profession no longer looks upon this anomaly as necessarily the benign cardiac malformation described by Roger in 1879 and reflected as such in the medical literature thereafter. Its significance depends upon the size of the defect, the amount of left-to-right shunt flow, and the response of the pulmonary vasculature to this increased pulmonary flow. In essence, a ventricular septal defect is a two-organ disease with both cardiac and pulmonary manifestations. An analysis of the cardiopulmonary dynamics of 66 patients with proved ventricular septal defects is presented in this paper. The clinical management of these patients is discussed.

Ventricular septal defects may be either muscular, membranous, or a combination of the two. The membranous defects may be located in the inflow tract of the right ventricle, beneath the septal leaflet of the tricuspid valve with the annulus of the tricuspid valve as one border, or they may be higher in the outflow chamber, also beneath the septal leaflet of the tricuspid valve but closer to the pulmonary valve. For purposes of this paper these defects will be considered in reference to their cardiopulmonary dynamics without consideration as to position. Some of the patients have been followed by us for as long as 10 years. All of them have had repeated roentgenologic, electrocardiographic, and cardiac catheterization examinations.

On the basis of the cardiopulmonary dynamics, patients with ventricular septal defects can be classified into three groups for purposes of study and management. Group 1 consists of those patients with small defects. These patients have normal development without signs or symptoms except for the loud-blowing precordial systolic murmur. Heart size and pulmonary vasculature are normal. Cardiac catheterization studies reveal minimal shunt flow and normal right ventricular and pulmonary artery pressures. The defect in these patients might be referred to as being of no clinical significance and of the type originally described by Roger.

Group 2 is an intermediate group, comprising the majority of patients with ventricular septal defects. For convenience of study and discussion this group can be further subdivided into grades 1, 2, and 3 (table 1) on the basis of degree of shunt flow and pulmonary artery pressures. This group includes children with varying sizes of ventricular septal defects, varying degrees of cardiac enlargement and pulmonary artery hypertension, and varying responses of the pulmonary vasculature. Their clinical course may remain relatively static, slowly progressive, or rapidly progressive. Reversibility of shunt flow and the development of a ventricular septal defect with dextroposition of aorta (Eisenmenger complex) may eventually develop in patients of group 2, grade 2, or of group 3.

Group 3 consists of those patients, mainly infants, having a more fulminating course. The septal defect and the shunt flow are large. There is a four-chamber cardiac enlargement, increased pulmonary vasculature, electrocardiogram evidence of both left and right ventricular enlargement, and elevated right ventricular and pulmonary artery pressures. These patients do poorly during the early months of life and have frequent episodes of congestive failure and bronchopneumonia. The mortality rate is high during the first months of life. Edwards [1] reported that, in an autopsy series on 30 patients with ventricular septal defects without associated malformations, who had been born alive, 19 had

From St. Vincent Charity Hospital.

V 165
1957

died before they reached the age of 6 months. Other investigators [2] have also reported a high mortality rate during the same period.

Civin and Edwards [3] have shown that in the fetus and at birth the ratio of the wall thickness to the lumen diameter of the pulmonary arteries is markedly reduced and that this accounts for the elevated pulmonary pressures in this early period. They have also shown that during the first six months of life there is a gradual thinning of the vessel wall and increase in the size of the lumen, with resulting reduction in the peripheral pulmonary vascular resistance. This is in keeping with the cardiac catheterization studies performed by Adams and Lind [4] in newborn infants with normal cardiovascular status, which showed evidence of right ventricular and pulmonary hypertension of moderate degree in each instance in this early period.

The persistence of the thick-walled, small-lumen, fetal-type pulmonary vessels responsible for high pulmonary resistance and pulmonary hypertension is a protective mechanism present in infants with ventricular septal defects and is a limiting factor to the pulmonary flow from large left-to-right shunts. The transition from thick-walled fetal to thin-walled, large-lumen, low-resistance vessels, with consequent increased pulmonary blood flow and congestion, accounts for the episodes of cardiopulmonary failure. With careful medical management the majority of these patients can be tided over the first months of life. As secondary pulmonary vascular sclerosis develops, with again higher resistance and lower pulmonary blood flows, the patients appear to go through several years of life with fairly normal development even in the presence of increasing pulmonary hypertension.

Cardiac Evaluation Studies

Clinical Evaluation.—The clinical evaluation of a patient with a ventricular septal defect is an important aspect, but its limitations should also be fully appreciated. Group 1 patients with small defects show normal development and activity. There are no episodes suggesting congestive failure or bronchopneumonia during their past. In contrast, small infants with large defects (group 3) have obvious retardation of physical development, with clinical courses characterized by repeated episodes of pulmonary congestion and pneumonia. Children in the intermediate group (group 2) are the ones most difficult to appraise clinically. The compensatory mechanisms of the heart and lungs are such that outwardly these children may not appear significantly handicapped by their defect even in the face of increasing pulmonary hypertension and cardiac enlargement. Furthermore, in the final appraisal of all data, the findings must be interpreted in reference to the age of the patient. This is particularly true in reference to cardiac catheterization findings. Pulmonary artery pressure elevation, which in a patient 15 years of age might not be considered significant, certainly would bear watching in an infant. Consequently, there can be no generalization regarding pressures without taking into consideration all factors, particularly the ratio of right ventricular or pulmonary artery pressures to systemic pressures. A right ventricular pressure of 60 mm. Hg in an infant having a systemic pressure of 70 to 80 mm. Hg is of as much significance as a right ventricular pressure of 80 mm. Hg, with a systemic pressure of 100 mm. Hg, in an older child.

From table 1 one will note that ventricular septal defects tend to be self-limiting in that with increasing age there is a decreasing incidence of patients seen. In other words, patients with ventricular septal defects tend to die from their anomaly. Fifty per cent of the patients studied were below 6 years of age, and in each subsequent five-year age group the number of patients seen was approximately less than half the number in the preceding age group. Ninety-two per cent of the patients were below 20 years of age, and only five patients had lived more than 20 years. Of the latter, three patients were in their 20's; one patient was 38 and another was 52 years of age.

Electrocardiograms.—Careful electrocardiogram interpretation can be of great assistance in evaluating patients with ventricular septal defects. The children in the so-called Roger group (group 1), as a rule, do not reveal any abnormality in the electrocardiograms. This is also true with regard to patients belonging to group 2, grade 1. Among the patients belonging to group 2, grade 2, 40% showed no abnormality in their electrocardiograms. This might be accounted for by the fact that biventricular enlargement occurs early. The neutralizing effects of the two ventricles may balance each other and give rise to no changes in the electrocardiograms. In the remaining 60% of the patients belonging to group 2, all electrocardiograms revealed an RSR′ pattern in the right-sided precordial leads, that is, VR_4, V_1, and often V_2. This is interpreted as diastolic overloading of the right ventricle according to Cabrera and Monroy [5] and may represent a stage before actual hypertrophy. In some cases significant changes were seen in the left-sided precordial leads. With the pressures in the right ventricle only moderately elevated at this time, namely, around 50 mm. Hg or so, there exists a large left-to-right shunt. This large shunt is responsible for enlargement of the left ventricular silhouette. This can often be picked up as a diastolic overloading pattern of the left ventricle, that is, tall R waves, preceded by somewhat exaggerated q waves as compared with normals, with positive high and peaked T waves in leads V_5 and V_6 and deep S waves in leads V_2 and V_3. This pattern in its typical form has been present in three of the cases belonging to group 2, grade 2.

As pulmonary hypertension in group 2, grade 3, and in group 3 develops, actual hypertrophy of the right ventricular muscle results. This shows up in the electrocardiogram as a tall R wave and a deep inverted T wave in V_1, thus adding the pattern of systolic overloading of the right ventricle. In ventricular septal defects the pattern of systolic overloading of the right ventricle is not seen in the pure form which is characteristic of pulmonary stenosis. It is always superadded to, or appears coexistent with, the diastolic overloading pattern of the right ventricle and thus gives rise to what may be termed composite loading of the right ventricle. This has been invariably seen in group 3 patients.

As the pulmonary resistance rises further and the pressures in the pulmonary and systemic arteries approach each other, the positive T waves in the left-sided precordial leads start flattening and may became negative. We have interpreted this as resulting from the disappearance of the diastolic overloading pattern of the left ventricle caused by diminishing left-to-right shunt. This has been observed consistently in all patients in whom the ratio of pulmonary artery–systemic artery pressure was approaching one. Since the best time to close a ventricular septal defect is when there is still a large left-to-right shunt, the presence of a diastolic overloading pattern of the left ventricle in the electrocardiogram has been accepted by us as a favorable time to operate; its disappearance signifies a grave prognosis.

Roentgenograms and Cardiac Fluoroscopy.—Roentgenograms and fluoroscopic examinations of the chest are of considerable value in the evaluation of cardiac size, chamber enlargement, and pulmonary vascularity and reflect with considerable accuracy the significance of the underlying defect. Heart size and pulmonary vascularity are normal in patients with small defects, whereas, for the most part, the greater the size of the defect, the larger will be the size of the heart and the greater the degree of pulmonary vascularity. The image amplifier has been of the utmost value in evaluating increases in pulmonary blood flow and the expansibility of the pulmonary vessels. It is of aid in differentiating between the engorged but static pulmonary vessels of severe pulmonary hypertension and those that are distended from increased pulmonary blood flow.

Cardiac Catheterization Studies.—The information obtained from cardiac catheterization studies regarding the cardiopulmonary hemodynamics is the most important information obtained from all the examinations performed. The diagnosis of ventricular septal defect is dependent upon the increase in the oxygen content of the blood of the right ventricle over that of the right auricle. The average increase noted was 1.9 vol. %, and this varied from 0.5 to 5.6 vol. %.

The pulmonary blood flow is obtained by applying the Fick principle; it equals the oxygen absorption per unit of time divided by the difference between the oxygen saturation of a systemic artery in volumes per cent and that of the pulmonary artery. The systemic blood flow can be computed in a similar manner by using the difference between oxygen saturation of the arterial blood and the mixed venous blood obtained in the right auricle. Since the numerators of the two Fick equations above are the same (cubic centimeters of oxygen absorption per minute), the ratio of systemic to pulmonary flow and the relative magnitude of the shunt flow (percentage of shunt flow) may be estimated by the inverse proportion of the denominators without determining oxygen absorption and introducing another determination that may be subject to error in small children.

The resistance of the pulmonary vascular bed is obtained by dividing the mean pulmonary arterial pressure by the pulmonary flow in cubic centimeters per minute. This is usually expressed in arbitrary units.

$$PRU = \frac{\text{Mean pulmonary artery pressure}}{\text{Pulmonary flow, cc./min.}}$$

Pulmonary flow, percentage of shunt flow, pulmonary artery pressure, and pulmonary vascular resistance are all important interrelated factors and provide information as to the underlying physiopathology of the pulmonary vascular bed. Increased pulmonary flow may initially, in the presence of a low pulmonary vascular resistance, not be associated with elevated pulmonary artery pressure. As resistance increases, pulmonary pressures increase and flow decreases. Pulmonary flow and vascular resistance can be quite accurately obtained in large children and adults, but they may be subject to error in small children and infants and particularly so if the patients are under anesthesia. For practical purposes the determinations most significant to us in the evaluation of a patient with a ventricular septal defect with pulmonary hypertension are the pulmonary pressures, percentage of shunt flow, and systemic arterial oxygen saturation obtained with response to room air, 100% oxygen, and intravenously administered aminophylline. Also, of particular value in the evaluation of a patient with a ventricular septal defect are the comparative data obtained from repeated cardiac catheterization studies at periodic intervals.

With the above concepts in mind, further analysis of the 66 patients (table 1) demonstrates that there is a fairly constant number of patients, or about 25%, in whom the ventricular septal defects are undoubtedly small; the right ventricular pressures are within normal range and clinically never become significantly increased. These patients have the benign type of ventricular septal defect, as

V 16
1957

described by Roger. Approximately 75% of the remaining patients have some elevation of pulmonary artery pressure.

A second group have sufficient shunt flow to cause some increase in pulmonary resistance and elevated pulmonary pressures in the range of 30 to 50 mm. Hg. Depending upon the degree of shunt flow and the response of the pulmonary vascular bed, a patient in one category may remain there; that is, his condition may remain static or over a period of time may progressively worsen. Certainly a right ventricular pressure of 40 to 50 mm. Hg with a moderate degree of shunt flow is more significant in a child, 3 to 4 years of age, than in an individual, 15 to 20 years of age. Approximately a third of the patients fall into this group of mildly elevated pulmonary pressures (grade 1).

In our opinion, pulmonary artery–right ventricular pressures above 50 mm. Hg (grade 2) are significant, and when elevated above 80 mm. Hg (grade 3) they are dangerous. It is interesting to note that more than 48% of the patients in the group under 5 years of age had significantly elevated pressures above 50 mm. Hg, and of this group 62.5% had pressures at the dangerous level of more than 80 mm. Hg. Thirty-three per cent of the patients in the age group 5 to 10 years had pressures above 50 mm. Hg, and 83% of these were in the group at the dangerous level of more than 80 mm. Hg. Furthermore, of the five patients over 20 years of age, four had right ventricular pressures above 50 mm. Hg and two had pressures above 80 mm. Hg, which may suggest that the presence of small defects over a long period of time may also be disabling.

All the patients with arterial oxygen saturation below 90 vol. % were in the group having right ventricular pressures above 80 mm. Hg. In contradistinction, not all patients with pulmonary artery pressures above 80 mm. Hg showed arterial desaturations below 90 vol. %. The higher the right ventricular pressure, the greater is the tendency to bidirectional shunting and, in turn, arterial desaturation. However, the significance of the time factor, or duration during which pulmonary hypertension has existed in impairing the efficiency of oxygenation, is suggested in table 1 by the increased percentage of patients with arterial desaturation in the progressive age groups. This factor is undoubtedly on the basis of pulmonary vascular sclerosis.

Management of Patients with Ventricular Septal Defects.—All patients suspected of having congenital heart disease and specifically, in this instance, ventricular septal defects should be thoroughly evaluated. If they are found to be in group 1 where the shunt flow is small and the pulmonary artery pressures are within normal range, obviously no definitive therapy is indicated. They can be allowed normal activity but should be reevaluated within a period of two to three years. Group 3 patients (the infants having a more fulminating course) are seriously ill and may die of their disease during the early months of life. They require the most skillful attention. It has been our policy to hospitalize these babies at the slightest provocation for intensive therapy. High oxygen concentration is of value in reducing the pulmonary hypertension, unless a stage is reached when the pulmonary vascular changes become too diffuse and extensive. The patients are kept on maintenance therapy with penicillin and digitalis. By such management the majority of these infants can be brought through the early months of life to such a period when they are a better operative risk. The management of patients in group 2, grade 1, with moderate shunt flows and pulmonary artery pressures between 30 and 50 mm. Hg, has varied, depending on whether the pressure is closer to 30 or 50 mm. Hg, on the percentage of shunt flow, and on the age of the patient. Children with moderate shunt flows (30+%) and pulmonary artery pressures below 40 mm. Hg have been advised to have repeat examinations one to two years later. If at the second or third evaluation pulmonary artery pressures are elevating significantly toward 50 mm. Hg, then operative closure of the defect is advised. If the findings are remaining stationary, then later evaluation is again recommended. If the individual is older (10 to 20 years), with pressures in the range of 40 mm. Hg, later evaluation is recommended.

TABLE 1.—*Analysis of Sixty-six Patients with Ventricular Septal Defects*

Patients			Right Ventricular Pressure, Mm. Hg				
				Group 2			Above 80, With Oxygen
Age Group, Yr.	No.	%	Group 1 30	30-50, Grade 1	Above 50, Grade 2	Above 80,* Grade 3	Saturation Below 90 Vol. %
0-5	33	50	Pts. 7	10	16	10	4
			% 21.2	30.3	48.5	62.5	40
5-10	18	27.2	Pts. 5	7	6	5	4
			% 28	39	33	83	80
10-15	7	10.6	Pts.	5	2	1	1
			%	71	29	50	100
15-20	3	4.5	Pts. 1	1	1	1	1
			% 33	33	33	100	100
20+	5	7.5	Pts.	1	4	2	2
			%	20	80	50	100
Av. Shunt Flow, % Systemic Flow...			26.3	50.4	66.7		

* Group 3 when fulminating type occurring in infants.

As more experience and knowledge of the hemodynamics of ventricular septal defects are attained, these opinions undoubtedly will change. When the operative risk becomes insignificant, operative closure may well be recommended in the presence of perhaps a 20% shunt flow and only a mild degree of pulmonary hypertension (40 mm. Hg).

All patients in group 2, grade 2 (patients with pulmonary artery pressures more than 50 mm. and less than 80 mm. Hg) have been advised to have operation unless otherwise contraindicated. This is the most satisfactory group of children to treat

surgically. They all have obvious clinical disability in advance (which, in some instances, may be only cardiac enlargement and increased pulmonary vascularity), their operative risk is negligible, and they are all greatly benefited by operation. The vascular changes in the lungs, if present, either are not severe or are easily reversible, for pulmonary complications therefrom have not been noted.

TABLE 2.—*Analysis of Eight Patients with High Pressure on Right Side of Heart*

Case No.*	Systolic Right Ventricle	Systolic, Pulmonary Artery	Diastolic, Pulmonary Artery	Brachial or Femoral Artery	% Ratio, Pulmonary Artery Brachial Artery
1 (S)	80	88	44	108	81
2 (S)	80	80	26	108	74
3 (S)	85	75	32	110	68
4 (S)	80	...	..	108	74
5 (F)	88	...	..	88	100
6 (F)	110	108	50	106	100
7 (F)	76	80	40	80	100
8 (F)	80	86	40	80	100

* S = Survival.
F = Fatality.

Patients in group 2, grade 3, with severe pulmonary hypertension and beginning arterial desaturation, are the ones who have the greatest number of problems and among whom operative mortality has been high. From the careful study of such patients before, during, and after operations, certain knowledge is emerging which has furthered our understanding of this condition, and upon it management can be based. After the sclerosis in the pulmonary arteries becomes irreversible from the long-standing pulmonary hypertension, it appears that such patients not only have gone beyond the stage where they may be benefited by surgical closure of the defect but may either die or be worsened by removing the increased pulmonary blood flow.

This concept is illustrated by the data in table 2, where the percentage rates of pulmonary artery–systemic artery pressures are analyzed. Comparative analysis of four patients with pulmonary artery pressures approximately 80% of systemic pressure and of four other patients in whom this ratio was 100% has revealed a 100% survival in the first group as compared with a 100% fatality in the second group. Although successful operations have been performed on six patients in whom this ratio was more than 80%, the danger of such operations has been high (50%) as compared with no mortality when this ratio was less than 80%. Microscopic sections of the pulmonary vessels (see figure) in the fatal cases have all shown extensive medial and intimal sclerosis.

This opinion is further substantiated by a recent report by Adams and associates,[6] correlating microscopic pulmonary vascular changes, obtained from lung specimen biopsies and examination of autopsy material, and survival after operation. These authors classified the pathological changes in the pulmonary vessels into three grades. Twelve patients having severe grade 3 changes in the media and intima of the pulmonary vessels failed to survive operation, as compared with 50% survival of 22 patients with mild to moderate vascular changes and 100% survival of 16 patients with normal pulmonary vessels.

It appears that, after a certain degree of thickening of the pulmonary arteries has developed, increased pulmonary blood flow and increased pressures are necessary for oxygenation. From the meager experience to date, one cannot place definite limits of pulmonary hypertension and arterial desaturation, beyond which operative intervention is contraindicated. The one generalization that can be made is that the operative risk increases and the benefit from surgery decreases with increases in the pulmonary pressure beyond certain limits. It is difficult to ascertain the exact mechanism of death in patients with pulmonary hypertension, but one of the most prevalent complications has been left-sided cardiac failure, with the inability to maintain systemic pressure, and subsequent pulmonary edema. It is postulated that, with closure of the ventricular septal defect and the shunting of blood from a lower diastolic system (pulmonary) to a higher one (systemic), the cardiodynamics cannot be readjusted so acutely. Two mechanisms have taken place

Photomicrograph of small pulmonary artery in patient with ventricular septal defect and secondary pulmonary hypertension, demonstrating both medial sclerosis and intimal proliferation. *A*, hematoxylin and eosin stain; *B*, Verhoeff-van Gieson elastic tissue stain (× 175).

when a ventricular septal defect with a large shunt flow has been closed. The first has been a reduced pulmonary blood flow, which may be insufficient in the presence of pulmonary vascular sclerosis; in the second mechanism, the left side of the heart is now

V 16
1957

pumping the entire blood volume against a higher vascular resistance than when the shunt was still open. It is possible that, with the reduced pulmonary flow in the presence of pulmonary vascular sclerosis, there is difficulty in blood getting through the pulmonary circulation to return to the left side of the heart and, in turn, difficulty in maintaining systemic pressures. It is possible that, if these operative changes could be more gradual or partial, the cardiopulmonary circulatory dynamics might have an opportunity to readjust and possible irreversible pulmonary vascular changes might with time have an opportunity to become partially or completely reversible.

One of the problems now presenting itself is how clinicians can determine preoperatively whether the pulmonary vascular changes are permanent or reversible and whether a patient with a ventricular septal defect and pulmonary hypertension should be subjected to surgery. It has been found from comparative studies made during cardiac catheterization determinations of the pulmonary vascular response to room air, 100% oxygen, and intravenously administered aminophylline that an opinion can be obtained as to the status of the pulmonary vessels and the degree of diffuseness of the vascular sclerosis. There can also be determined whether such vessels are capable of dilating, whether there are sufficient number of remaining normal blood vessels, what the likelihood of the patient surviving the operative procedure would be, and what is the possible benefit to be derived from surgery. Examples of the above pulmonary vascular response in patients with severe pulmonary hypertension are noted in table 3.

TABLE 3.—*Pulmonary Vascular Response and Prognosis in Four Patients with Severe Pulmonary Hypertension*

Case No.	Age, Yr.	% Shunt Flow	Systemic Pressure, Mm. Hg	Pulmonary Artery Pressure: Room Air, Mm. Hg	Pulmonary Artery Pressure: 100% Oxygen, Mm. Hg	Result of Surgery
1.....	3	61	100/70	80/40	29/10	Good
2.....	2	71.4	80/60	80/40	78/38	Died
3.....	10	62	110/66	86/32	45/15 25/5 (postoperative)	Died
4.....	4	45	94/70	80/26		Now convalescent
		0 (6 mo. postoperative)		75/30		

The effect of the 100% oxygen concentration undoubtedly is on the unaffected or partially affected vessels still capable of dilating and reducing the pulmonary vascular resistance. As noted in table 3, the pulmonary vascular response in case 1 was a lowering by more than 60% of the pulmonary artery pressure when 100% oxygen was breathed. The patient survived the operation, and the result has been good. In contrast, there was no response to 100% oxygen in case 2, suggesting a fixed arterial bed. This child had had numerous episodes of congestive failure. At the time of surgery a large ventricular septal defect was found, the diameter of which was as large as the aortic valve. The child died 30 hours after operation. The microscopic sections of the lungs showed extensive and diffuse vascular sclerosis. A satisfactory response was noted in case 3, with the patient breathing room air at a pulmonary artery pressure of 86/32 mm. Hg and 100% oxygen at a pressure of 45/15 mm. Hg; after closure of the ventricular septal defect the pulmonary artery pressure was reduced even further to 25/5 mm. Hg. The prognosis under such circumstances was felt to be quite hopeful. The immediate postoperative course was satisfactory. However, on the third postoperative day an intratracheal tube that had been inserted because of excessive secretions became plugged, causing difficulty in breathing and cyanosis. While this was being remedied, a cardiac standstill developed. The chest was opened, and beating of the heart restarted; however, this did not take place before cerebral anoxia occurred, for afterward the patient had evidence of cerebral damage and died three days later. Microscopic sections of the lungs showed only minimal to moderate vascular sclerosis. It is felt that, from the pulmonary vasculature aspect, this patient was capable of normal hemodynamic function. Another example of probably permanent pulmonary vascular changes is case 4; this patient was studied before the importance of studies with 100% oxygen was known. As noted in table 3, even though there was no shunt flow postoperatively, there had been no significant reduction in pulmonary artery pressures at the time of checkup cardiac catheterization studies six months later.

Comment

Careful evaluation of the data obtained in the cardiac evaluation studies now allows us to differentiate in advance which patients may have the greatest opportunity of being helped and which patients may be beyond surgical correction. Twenty-two patients with isolated ventricular septal defects have now been operated on by means of a mechanical pump-oxygenator. There was an average right ventricular pressure of 73 mm. Hg. The significance of pulmonary hypertension is reflected in both operative mortality and benefit derived from operation. The average pressure in children who survived operation has been 64 mm. Hg as compared with 94.6 mm. Hg in children who died. There has been no operative mortality among patients with pulmonary artery pressures less than 80% of systemic pressure. Furthermore, checkup cardiac catheterization studies in those children studied so far postoperatively demonstrate that some patients with pressures around 80 to 90 mm. Hg have a fixed pulmonary vascular bed that either will not reverse itself or will do so slowly over a period of years.

With the success attained in the direct-vision closure of ventricular septal defects by means of a pump-oxygenator, the operative risk is so small in good-risk patients (pressures below 80 mm. Hg) that one should not hesitate to recommend operation during the opportune time. In our series of 22 patients with isolated ventricular septal defects, there has been no operative mortality—early or late—among patients with right ventricular pressures below 80 mm. Hg, whereas the 6 patients who died postoperatively from cardiopulmonary complications had an average right ventricular pressure of 94.6 mm. Hg.

10465 Carnegie Ave. (6) (Dr. Kay).

References

1. Edwards, J. E.: Symposium on Cardiovascular Diseases: Functional Pathology of Congenital Cardiac Disease, Pediat. Clin. North America **1**:13-49 (Feb.) 1954.

2. Zacharioudakis, S. C.; Terplan, K.; and Lambert, E. C.: Ventricular Septal Defects in Infant Age Group, abstracted, Circulation **14**:1022-1023 (Nov.) 1956. Gasul, B. M., and others: Incidence and Mortality Rates of 44 Various Entities of Congenital Malformations of Heart: Nine-Year Study of 1,464 Patients, abstracted, ibid. **14**:939-940 (Nov.) 1956.

3. Civin, W. H., and Edwards, J. E.: Postnatal Structural Changes in Intrapulmonary Arteries and Arterioles, A. M. A. Arch. Path. **51**:192-200 (Feb.) 1951.

4. Adams, F. H., and Lind, J.: Physiologic Studies on Cardiovascular Status of Newborn Infants with Special Reference to Ductus Arteriosus, abstracted, Circulation **14**:904-905 (Nov.) 1956.

5. Cabrera, E., and Monroy, J. R.: Systolic and Diastolic Loading of Heart: I. Physiologic and Clinical Data, Am. Heart J. **43**:661-668 (May) 1952.

6. Adams, P.; Lucas, R. V.; Ferguson, D. K.; and Lillehei, C. W.: Significance of Pulmonary Vascular Pathology in Ventricular Septal Defect as Determined by Lung Biopsy, abstracted, Circulation **14**:905 (Nov.) 1956.

THE PROTECTIVE EFFECT OF MONOVALENT ASIAN-STRAIN VACCINE AGAINST ASIAN INFLUENZA

James O. Culver, M.D., Berkeley, Calif., Major Robert E. Nitz (M.C.), U. S. Army
and
Edwin H. Lennette, M.D., Ph.D., Berkeley, Calif.

An aqueous influenza vaccine containing the A/Japan/305/57 strain was compared with a placebo in a study of 2,364 Army recruits. The vaccine was injected subcutaneously in 1-cc. doses containing about 250 CCA (chick cell agglutinating) units. The data, obtained during the declining phase of an outbreak of respiratory disease composed largely but not entirely of Asian influenza, showed 20 cases of respiratory illness occurring 10 or more days after inoculation among 916 recruits in the vaccinated group and 55 comparable cases among 1,448 recruits in the placebo group. The difference would occur by chance only once in 36 trials and is evidence of a protective effect. Estimate of effectiveness was 43%. Since not all of the illness could be considered to be influenza, the estimate of effectiveness is minimal.

A series of field trials [1] in the early 1940's showed that influenza vaccines exert a protective effect against infection with the homologous virus type.[2] In the 1947 studies, vaccines previously regarded as effective failed to protect, and the lack of protective capacity was attributed to the world-wide emergence of an antigenically new subgroup of influenza A viruses, since collectively termed the A′ group.[3] Retrospectively, observations made as early as 1943-1944 [1b] suggested that antigenic variants of decided import to preventive medicine were occurring, and some warning of the antigenic nature of the viruses that would be encountered during 1947 was afforded by the isolation of the Cam strain in Australia in 1946, albeit there was no indication at that time that strains related to the Cam would become world-wide in their distribution.[4]

Since 1947, influenza vaccines have contained one or more strains of the A′ group. In 1957, as in 1947, outbreaks of influenza A appeared in various parts of the world. In 1957, outbreaks occurred in China, Singapore, and Hong Kong and rapidly spread to Taiwan, Japan, the Philippines, India, and other areas.[5] Small outbreaks have occurred in the United States after the spread of the virus from

From the Viral and Rickettsial Disease Laboratory, California State Department of Public Health, Berkeley, Calif.

Chief, Viral and Rickettsial Disease Laboratory, and Member, Commission on Influenza (Dr. Lennette); Medical Officer Viral and Rickettsial Disease Laboratory, and Associate, Commission on Influenza (Dr. Culver); and Preventive Medicine Officer, Fort Ord, Calif. (Major Nitz).

V 16
1957

California, its presumed point of introduction. Antigenic analysis of a number of strains incriminated in the 1957 episodes indicate that they all belong to the familiar type A family of influenza viruses, but constitute a new subgroup, collectively termed the "Asian strains."[6] In their antigenic composition, these new viruses have been found to be at least as different from previous type A and A′ viruses as were the A′ strains from the A strains. This year, as was not true in 1947, some warning of what may impend has been given the United States and certain other areas of the world, inasmuch as the Asian strains, so different antigenically from those responsible for influenzal disease during the winter of 1956-1957 and from those incorporated in vaccines prepared for the 1956-1957 season, have caused widespread illness in the Orient and, at the time of writing, considerable morbidity in the United States.

It is assumed, by analogy with the past performance of influenza vaccines, that preparations containing a so-called Asian strain of the virus should confer protection comparable to that induced by previous vaccines which contained strains antigenically similar to those causing the outbreaks. However, direct evidence of a protective effect is lacking.[7] In view of these considerations, a field trial was conducted under the auspices of the Commission on Influenza of the Armed Forces Epidemiological Board; the present communication deals with a preliminary evaluation of the protective effect of a monovalent Asian strain vaccine when tested against influenza produced by Asian strain viruses.

Material and Methods

The Vaccine.—An aqueous-type vaccine containing only the A/Japan/305/57 strain was employed. All the vaccine used was prepared by a single manufacturer, who used the red blood cell elution method and inactivated the virus with 1:4,000 formalin. The formalin was not neutralized. The final product was subjected to the usual sterility and safety tests prescribed by the National Institutes of Health, and thimerosal was added as a preservative. The vaccine was standardized to contain 400 CCA units of virus per cubic centimeter. However, technical difficulties have been experienced with the conventional assay method when applied to the Asian group strains and hence the designated unitage may not be accurate. (After this paper was completed, we were informed that the vaccine we used may have contained as little as 250 CCA units per cubic centimeter.[8])

A placebo consisting of formalinized saline solution was administered to the control population. Both the specific vaccine and the placebo were given subcutaneously in 1-cc. doses.

The Study Population.—The assessment was undertaken at Fort Ord, Calif., during the latter part of an outbreak of Asian influenza. This outbreak began in mid-June, 1957, reached its peak during mid-July, and continued, with a declining incidence, through August. During this outbreak, six isolations of virus were made from patients hospitalized with influenzal disease. Serologically, all six strains were very closely related to, and virtually indistinguishable from, the A/Japan/305/57 strain. Diagnostic complement-fixation tests are currently being done on the serums of all patients who were admitted to the respiratory disease ward at the Station Hospital. Because of the large number of hospitalized individuals, the tests are not as yet completed, but the serologic findings up to the time of writing indicate that 645 men admitted to hospital with respiratory disease had influenza. (A serologic diagnosis of influenza is based on the occurrence of a four-fold or greater rise in complement-fixing antibody titer to type A influenza virus, the family to which the Asian strain belongs.) Most individuals with a clinical diagnosis of influenza were not admitted to the hospital. Extrapolations based on the number of patients seen in dispensaries and excluded from the hospital in relation to the number of patients admitted to the hospital, and the number in whom there was serologic evidence of influenzal infection, suggest that some 4,000 cases of influenza may have occurred on the post during June and July, 1957.

Vaccine containing the Asian strain virus was not available at the beginning of the outbreak and was received only after the outbreak had reached its peak and the rates were actually declining. In addition, at the time the vaccine was received the upper respiratory disease rates were so high that all available hospital facilities were in full use and it was necessary to exclude from the hospital those individuals who had mild influenza, or influenza in an uncomplicated form. Those individuals who could not be hospitalized were returned to the barracks and kept under intermittent medical surveillance on an outpatient basis. For these reasons, plus the fact that large numbers of men on the post had already been exposed to infection, as well as the possiblity that considerable numbers might already have been immunized by naturally occurring infections, it was decided to administer the vaccine only to new recruits entering the post. Such recruits were considered to constitute a highly susceptible population in which the disease would perpetuate itself unless steps were taken to break the infection cycle by immunization.

Inoculations were begun July 26, 1957, and completed on Aug. 14, 1957. It was planned to give the specific vaccine to 40% of the men in the newly formed recruit companies and to give placebo to the remaining 60%. The recruit company rosters were divided serially into groups of 10 men; the first 4 men received the vaccine, the second 6 received the placebo. Where a relative contraindication to the administration of vaccine existed, as in the case of hypersensitivity to egg material or a current history of asthma, the placebo was given.

Because of the complex situation prevailing on the post at the time, it was decided that evaluation of the vaccine should be attempted on two different bases. The first method considered all men who entered the hospital with respiratory disease and were members of vaccinated companies. In this method, material appropriate for laboratory diagnostic purposes is obtained, generally blood specimens taken during the acute and convalescent stages. The necessary follow-up, however, is cumbersome; the results of laboratory tests are long delayed; and men who are excluded from hospital care are not taken into account in the evaluation. The second method is based on the size and nature of the population reporting to the dispensaries with respiratory disease. For this method, a tabulation was made of all men from the vaccinated companies who reported to the dispensaries with signs and symptoms consistent with respiratory disease.

Because of the difficulties associated with the clinical diagnosis of influenza, no attempt was made to differentiate an influenza syndrome from other upper respiratory disease. Organizational difficulties and the heavy work load imposed by the large number of patients reporting to the dispensaries precluded any attempt, however desirable, to obtain material for viral diagnostic tests.

The findings obtained by the second method are reported here. By this method, the vaccine was tested, in essence, against total respiratory disease and, unfortunately, at a time when the incidence of influenza was known to be declining. Ordinarily, we would not undertake evaluation of a vaccine by this method because of a number of obvious difficulties which arise when a vaccine is used in the face of a large outbreak or at a time when the morbidity rate is declining. However, because some information on the protective effect of the vaccine is highly desirable in the present situation, a study by the second method was undertaken as a calculated risk. The study was conducted as a "double-blind," that is, neither the recruits who were inoculated nor the physicians who examined them in the event of illness knew which man had received the specific vaccine and which the placebo.

Results

The active vaccine and the placebo were given to recruits arriving at Fort Ord during the period from July 26 through Aug. 14, 1957. A total of 916 men, representing 39% of the study group, received the specific vaccine, and 1,448 men, representing 61% of the study group, received the placebo. The 11 recruit companies comprising the study group were followed for varying periods of time, and were observed through Aug. 26, 1957. The incidence of total respiratory disease in the two study groups is presented in the table. When men reported to the dispensary more than once for treatment of respiratory illness, only one case was considered to exist. During the interval from July 27 through Aug. 26, 405 recruits in the two groups reported to the dispensary with respiratory illness.

For the purposes of this study, the number of men reporting with respiratory illness was subdivided into two groups, viz., individuals reporting with respiratory illness within 10 days of receipt of vaccine or placebo and individuals reporting 10 or more days after administration of these materials. No vaccine can be expected to exert an immediate protective effect, and it is necessary to remove from consideration those individuals who become ill during the postvaccination interval when immunity is developing and attaining an effective level; in the case of influenza, there is general agreement that a resistant state, as reflected qualitatively by the appearance of antibodies, develops in about 10 days.

The table shows that 330 men in the recruit study population reported to the dispensary within 10 days after inoculation. Of these 330 individuals, 114 had received the specific vaccine and 216 had received the control preparation. Respiratory illness was encountered with a greater frequency in men who had received the placebo material than in the group who had received the specific vaccine; the difference suggests, but by no means proves, that some slight degree of protection might have been brought about even during this early interval postinoculation.

*Occurrence of Respiratory Disease in Trainees Who Received Asian-Strain Influenza Vaccine or Placebo**

Population Group	No. Men Entering Study†	Cases Reported Less Than 10 Days After Inoculation		Cases Reported 10 or More Days After Inoculation	
		No.	Attack Rate per 1,000‡	No.	Attack Rate per 1,000‡
Vaccinated ...	916	114	124.5	20	21.8
Placebo	1,448	216	149.2	55	37.9

* During the period from July 27 through Aug. 26, 1957.
† From July 26 through Aug. 14, 1957.
‡ Attack rates are based on total number of men in vaccinated and placebo groups, although it is appreciated that the period of observation varied from 13 to 31 days in different companies in study.

Analysis of the data relating to the occurrence of respiratory disease in individuals 10 or more days postinoculation reveals more definite evidence of protection. Of 75 men who reported to the dispensaries with respiratory illness, 10 or more days after inoculation, 20 were found to have received the specific vaccine and 55 the control material. This gives a case rate of 22 per 1,000 in the vaccinated men and a case rate of 38 per 1,000 in the control group. The significance of the difference of these two case rates was calculated and the difference was found to be significant at the 0.05 level ($p=0.0278$). In other terms, such a difference might occur by chance only once in 36 times. Point estimate of effectiveness of the vaccine was calculated

V 16
1957

and found to be 43%. Since this field trial took no account of the specific diagnosis of influenzal disease and since respiratory disease of other etiology almost certainly was occurring in the study groups, the actual effectiveness of the vaccine against influenzal disease may well have been higher.

Comment

The study reported here deals with crude data. The absence of specific etiological diagnosis does not permit as soundly based a quantitative evaluation as would be desirable. The period of observation was short and did not permit any estimate of the effectiveness of the vaccine over an extended period of time. Nonetheless, it was possible to obtain a preliminary answer to a question whose importance is heightened by the time factor, viz., can an influenza vaccine prepared from an Asian strain virus effect a decrease in the morbidity due to infection with Asian strains. To the best of our knowledge, direct evidence on this point, with the exception of this study, is unavailable.[7]

It is of interest that the vaccine used in this study might from some standpoints be considered immunogenically inadequate. Of 21 individuals tested from two to four weeks after inoculation with this vaccine, about one-third showed a fourfold or greater complement-fixing antibody titer response. Patients with influenzal disease during this outbreak responded with an eightfold to sixteenfold or greater rise in complement-fixing antibody titer during their illness. The hemagglutination-inhibiting antibody response elicited by the vaccine was virtually nil. (A similar apparent failure to call forth a hemagglutination-inhibiting antibody response has been noted by us with other batches of Asian strain vaccines administered to civilian population groups.) The virtually complete absence of hemagglutination-inhibiting antibody post vaccination may be more apparent than real, since the hemagglutinating activity of Asian strain viruses is capricious and since their erratic and atypical behavior leads to technical difficulties in the performance of hemagglutination and hemagglutination-inhibition tests.[9]

In spite of the adverse factors inherent in this study, it appears probable that a genuine protective effect was demonstrated. Disregarding questions of relative potencies of vaccines, the data presented here support previous opinions that influenza vaccines containing Asian strain viruses may be recommended for use in appropriate population groups and under suitable circumstances.

Summary

A field trial was undertaken of a monovalent influenza vaccine containing only the A/Japan/305/-57 strain of influenza A virus. Encouraging evidence was obtained that the vaccine exerted a genuine protective effect. The point estimate of effectiveness was 43%. Because of the adverse conditions under which the evaluation was undertaken, this figure represents an estimate of minimal efficacy; when the vaccine is given under much more suitable conditions, its protective capacity may well be considerably higher.

2151 Berkeley Way (4) (Dr. Lennette).

Lieut. Lee C. Matthews, M.S.C., U. S. Army, and Chief Warrant Officer William A. Taylor, U. S. Army, and Miss Lucile Green, Viral and Rickettsial Disease Laboratory, assisted in this study.

This work was conducted under the auspices of the Commission on Influenza, Armed Forces Epidemiological Board, and supported by the Office of The Surgeon General, Department of the Army.

References

1. (*a*) Clinical Evaluation of Vaccination Against Influenza: Preliminary Report by Members of Commission on Influenza, J. A. M. A. **124:**982-985 (April 1) 1944. (*b*) Francis, T., Jr.: Development of 1943 Vaccination Study of Commission on Influenza, Am. J. Hyg. **42:**1-11 (July) 1945. (*c*) Rickard, E. R.; Thigpen, M. P.; and Crowley, J. H.: Vaccination Against Influenza at University of Minnesota, ibid. **42:**12-20 (July) 1945. (*d*) Hale, W. M., and McKee, A. P.: Value of Influenza Vaccination When Done at Beginning of Epidemic, ibid. **42:**21-27 (July) 1945. (*e*) Hirst, G. K.; Plummer, N.; and Friedewald, W. F.: Human Immunity Following Vaccination with Formalinized Influenza Virus, ibid. **42:**45-56 (July) 1945. (*f*) Salk, J. E.; Menke, W. J., Jr.; and Francis, T., Jr.: Clinical, Epidemiological and Immunological Evaluation of Vaccination Against Epidemic Influenza, ibid. **42:**57-93 (July) 1945. (*g*) Magill, T. P.; Plummer, N.; Smillie, W. G.; and Sugg, J. Y.: Evaluation of Vaccination Against Influenza, ibid. **42:**94-105 (July) 1945. (*h*) Eaton, M. D., and Meiklejohn, G.: Vaccination Against Influenza: Study in California During Epidemic of 1943-44, ibid. **42:**28-44 (July) 1945.

2. Footnotes 1*a*, *b*, *c*, *d*, *e*, *f*, and *g*.

3. Francis, T., Jr.; Salk, J. E.; and Quilligan, J. J., Jr.: Experience with Vaccination Against Influenza in Spring of 1947: Preliminary Report, Am. J. Pub. Health **37:**1013-1016 (Aug.) 1947. Sigel, M. M., and others: Influenza A in Vaccinated Population, J. A. M. A. **136:**437-441 (Feb. 14) 1948. Loosli, C. G.; Schoenberger, J.; and Barnett, G.: Results of Vaccination Against Influenza During Epidemic of 1947, J. Lab. & Clin. Med. **33:**789-798 (July) 1948.

4. Rasmussen, A. F., Jr.; Stokes, J. C.; and Smadel, J. E.: Army Experience with Influenza, 1946-1947: II. Laboratory Aspects, Am. J. Hyg. **47:**142-149 (March) 1948.

5. Burney, L. E.: Influenza, J. A. M. A. **164:**2029-2033 (Aug. 31) 1957.

6. Meyer, H. M., and others: New Antigenic Variant in Far East Influenza Epidemic, 1957, Proc. Soc. Exper. Biol. & Med. **95:**609-616 (July) 1957. Jensen, K. E.: New Set of Type A Influenza Viruses, J. A. M. A. **164:**2025-2029 (Aug. 31) 1957.

7. Influenza 1957, editorial, Am. J. Pub. Health **47:**1141-1144 (Sept.) 1957.

8. Davenport, F. M.: Personal communication to the authors.

9. McKinney, R. W.: Personal communication to the authors. Jensen, K. E.: Personal communication to the authors. Culver, J. O.; Nitz, R. E.; and Lennette, E. H.: Unpublished data. Footnote 8.

SEVERE IMMEDIATE REACTIONS TO BIOLOGICALS CAUSED BY SILK ALLERGY

Spencer F. Brown, M.D., Darien, Conn.
and
Monroe Coleman, M.D., Stamford, Conn.

Three patients developed severe, immediate allergic reactions after the injection of an immunizing agent. Each of the three patients gave a positive direct or passive transfer reaction to silk extract. This proved that the patients were allergic to silk and that it was this antigen, present as a contaminant in the biological products, which produced the allergic reactions in these patients. It is apparent that sufficient amounts of silk antigen become incorporated into the biological product as a result of filtration through silk membranes to be antigenically significant when given to a highly allergic individual.

Immunizing agents have on numerous occasions produced severe allergic reactions which in some instances have resulted in shock and even death. Components of culture mediums which remained in the biological products were found to be the antigens which produced some of these reactions. Typhus vaccine, which is made from organisms grown on chick embryos, has produced anaphylactic shock in egg-sensitive individuals,[1] while tetanus toxoid has caused severe reactions in patients who were sensitive to peptones and proteoses of the culture medium.[2]

The precise cause of allergic reactions to biological agents is often not determined. For example, Werne and Garrow [3] reported the case of identical twins who died after booster injections of diphtheria toxoid combined with pertussis vaccine. It was not determined whether the reactions were caused by one of the immunological agents, by preservatives or other known components of the diluent, by products of the culture mediums, or by contaminants. Contamination of any injectable agent with potent antigenic materials may occur during manufacture or during preparation for administration. It is known that penicillin can contaminate syringes easily and be injected unknowingly to produce allergic shock in susceptible individuals.[4]

Report of Cases

Three cases of severe, immediate allergic reactions following the injection of various biological agents are presented. Case 1 is unusual in that a child developed severe allergic reactions on three separate occasions to three different biological agents, diphtheria and tetanus toxoids and pertussis vaccine combined (triple antigen), tetanus toxoid, and human gamma globulin. Only one other case of allergic reaction [5] to human gamma globulin has previously been reported. In case 2, allergic shock developed after a booster injection of tetanus toxoid; in case 3, the allergic reaction developed after the third of a series of injections of typhoid-paratyphoid vaccine.

In the course of investigating these problems, we were informed of the experiences of Friedman and associates[6] and of Rosenblum,[7] who demonstrated in two similar cases of allergic reactions to biological agents that the patients were not sensitive to any of the identifiable components of the biological products except silk, which was present as a contaminant.

Case 1.—An 8-year-old boy, who had had bronchial asthma since the age of 3, was given three injections of triple antigen (aluminum phosphate adsorbed or alum precipitated) at monthly intervals commencing when he was 6 months of age with no untoward effects. In November, 1952, when he was 4½ years of age the patient was given a booster injection of 0.5 ml. of triple antigen (Co. A); within several minutes he began to cough, wheeze, and appear cyanotic. (Companies designated as Co. A, B, C, and D are well-known pharmaceutical companies.) The symptoms gradually disappeared after an injection of epinephrine had been given. A similar but more severe episode occurred 22 months later, after an intracutaneous injection of 0.1 ml. of fluid tetanus toxoid (Co. A), diluted 1:100 with buffered saline solution, had been given as a test. In this reaction the patient developed the symptoms previously noted, in addition to marked weakness. A large wheal appeared at the test site. After two injections of 0.4 ml. of epinephrine were given, the symptoms subsided. A tonsillectomy was performed on May 18, 1955, and it was discovered postoperatively that the patient had been exposed to measles. As a prophylactic measure, 1 ml. of human gamma globulin (Co. A) was given intramuscularly. Within four minutes, the patient became weak and developed generalized pruritus. This was followed by a generalized erythema and urticaria, pallor of the face, and tightness in the chest. The respirations became shallow and labored and the pulse weak and thready. Repeated injections of epinephrine were given. It was over an hour before the patient improved sufficiently to be considered out of danger. In subsequent electrophoretic studies of the patient's serum, the gamma globulin fraction was found to be normal. The patient's mother had hay fever and asthma, and his father developed an allergic reaction following an injection of tetanus toxoid.

Case 2.—A 9-year-old girl was given 0.2 ml. of tetanus toxoid (aluminum phosphate adsorbed) (Co. A) on June 21, 1956, as a booster injection following a laceration. Within three minutes she began to cough and sneeze; this was followed by wheezing, rales at the bases of the lungs, acute

Assistant Pediatrician, Stamford and St. Joseph's Hospitals; Assistant Clinical Professor of Pediatrics, Yale University Medical School (Dr. Brown), and Assistant Attending Physician, Stamford and St. Joseph's Hospitals; Clinical Assistant in Allergy, Jewish Hospital, Brooklyn, N. Y. (Dr. Coleman).

Read in the Session on Allergy before the Section on Miscellaneous Topics at the 106th Annual Meeting of the American Medical Association, New York, June 5, 1957.

V 16
1957

respiratory distress, and angioedema of the eyes. The patient was given an injection of diphenhydramine (Benadryl) hydrochloride and epinephrine, and she slowly improved during the next few hours. Slight wheezing was still present at the end of three hours. The history revealed that sneezing, cough, and lacrimation had occurred following an injection of tetanus toxoid several years previously. There was a positive personal and family history of allergic diseases.

TABLE 1.—*Results of Passive Transfer Studies in Patient in Case 1*

Test Substance	Dilution or Concentration	Passive Transfer Reaction: On Sites Sensitized with Serum from Patient	Passive Transfer Reaction: On Nonsensitized Sites
Tetanus toxoid, fluid, (Co. A)	1:10	++	0
Tetanus toxoid* (Co. A)	1:10	+++	0
Triple antigen* (Co. A)	1:10	++	0
Human gamma globulin (Co. A)	1:10	±	0
Tetanus toxoid* (Co. C)	1:10	0	0
Triple antigen* (Co. B)	1:10	0	0
Human gamma globulin (Co. D)	1:10	0	0
Silk	0.01 mg. nitrogen/ml.	+++	0
Potassium penicillin G (Co. A)	50,000 units/ml.	0	0
Beef		0	0
Buffered saline solution		0	0

* Aluminum phosphate adsorbed or alum precipitated.

CASE 3.—A 12-year-old girl received three injections of typhoid-paratyphoid vaccine (manufacturer not known). The first two injections were without incident. The third injection was given on Oct. 30, 1955, and within 30 minutes there was marked generalized itching and erythema, a swollen sensation in the throat with difficulty in breathing, and angioedema of the face. There was a severe constricting sensation of the skull, vomiting, and marked dyspnea. The patient received two injections of epinephrine and improved after one hour. She has allergic rhinitis and bronchial asthma.

Immunological Studies

The cause of the allergic reactions which followed the injections of the three biological agents in case 1 was investigated by the passive transfer technique. Direct tests were avoided because of the severe reaction which developed after skin testing had been done with diluted tetanus toxoid. Serum was obtained from the patient on Sept. 10, 1956, 16 months after the last allergic reaction. Sites on normal subjects were sensitized by intracutaneous injections of 0.05 ml. of the serum. Four days later, separate sites were tested by the intracutaneous injection of about 0.02 ml. of tetanus toxoid, fluid (Co. A); tetanus toxoid, aluminum phosphate adsorbed (Co. A); triple antigen (Co. A); triple antigen (Co. B); tetanus toxoid (Co. C); human gamma globulin (Co. A); human gamma globulin (Co. D); potassium penicillin G solution (Co. A), 50,000 units per milliliter; silk extract, 0.01 mg. of nitrogen per milliliter; beef extract; and buffered saline solution.

Prior to testing, each biological agent was diluted, one part with nine parts of buffered saline solution, in order to lessen its irritation property. As a control on the patient's serum, passive transfer tests were done with all of the above substances on sites sensitized with serums obtained from two allergic patients which were known to contain reagins to pollen and some foods but not to silk.

Results

Positive passive transfer reactions were obtained with each biological agent which had produced an allergic reaction in case 1. A moderate passive transfer reaction (2+) was obtained with tetanus toxoid, fluid (Co. A); a moderate passive transfer reaction (2+) was obtained with triple antigen (Co. A); a slight passive transfer reaction (1+) was obtained with human gamma globulin (Co. A); a moderate to marked passive transfer reaction (3+) was obtained with tetanus toxoid (Co. A). Silk extract, 0.01 mg. of nitrogen per milliliter, gave a moderate to marked passive transfer reaction (3+). Negative reactions were obtained with tetanus toxoid (Co. C); triple antigen (Co. B); human gamma globulin (Co. D); potassium penicillin G solution (Co. A), 50,000 units per milliliter; beef extract; and buffered saline solution. Control tests with these materials on nonsensitized sites of the subject gave negative reactions (table 1). These passive transfer studies were repeated on several subjects, and similar results were obtained in each instance. The two control serums which contained reagins to pollen and several foods gave negative passive transfer reactions to all of the substances listed above.

The three biological agents which had produced positive passive transfer reactions were diluted in varying amounts with buffered saline solution. The diluted antigens were tested on sites sensitized with serum from the patient. A 1:100 dilution of tetanus toxoid (Co. A) gave a moderate passive transfer reaction (2+), and a 1:1,000 dilution gave a slight passive transfer reaction (1+). Triple antigen (Co. A) diluted 1:100 gave a slight passive transfer reaction (1+). Human gamma globulin (Co. A) diluted 1:100 gave a plus-minus passive transfer reaction (±) (table 2). These findings reveal the high immunological activity of this patient's serum, which reacted to traces of antigen even though 16 months had passed since the patient's allergic reaction had occurred.

TABLE 2.—*Results of Passive Transfer Tests with Varying Dilutions of Biological Agents on Serum from Patient in Case 1*

Test Substance	Dilution	Passive Transfer Reaction: On Sites Sensitized with Serum from Patient	Passive Transfer Reaction: On Nonsensitized Sites
Tetanus toxoid* (Co. A)	1:10	+++	0
	1:100	++	0
	1:1,000	+	0
Triple antigen* (Co. A)	1:10	++	0
	1:100	+	0
Human gamma globulin (Co. A)	1:10	+	0
	1:100	±	0
Silk	0.01 mg. nitrogen/ml.	+++	0
	0.001 mg. nitrogen/ml.	+	0

* Aluminum phosphate adsorbed or alum precipitated.

In case 2, serum was obtained from the patient on Feb. 25, 1957, 8 months after the occurrence of the allergic reaction. Passive transfer tests were

done as in case 1. A moderate to marked passive transfer reaction (3+) was obtained to silk, 0.01 mg. of nitrogen per milliliter and also to tetanus toxoid, fluid (Co. A). A moderate passive transfer reaction (2+) was obtained to tetanus toxoid (Co. A) and a negative to slight (±) to tetanus toxoid, fluid (Co. A), diluted 1:1,000 with buffered saline solution. Tetanus toxoid (Co. B); potassium penicillin G, 50,000 units per milliliter; and buffered saline solution gave negative passive transfer reactions (table 3).

In case 3, the patient was tested directly on March 16 and March 23, 1957, almost one and one-half years after her allergic reaction. Typhoid-paratyphoid vaccine (Co. A), diluted 1:10 with buffered saline solution, gave a marked positive direct skin test reaction (4+). Silk, 0.01 mg. of nitrogen per milliliter, gave a moderate to marked positive reaction (3+). Tetanus toxoid (Co. A) gave a moderate to marked positive reaction (3+). Negative reactions were obtained to typhoid-paratyphoid vaccine (Co. C); potassium penicillin G (Co. A), 50,000 units per milliliter; tetanus toxoid (Co. C), and buffered saline solution (table 4).

Comment

Three patients developed severe, immediate allergic reactions following the injection of either tetanus toxoid, fluid (Co. A); tetanus toxoid (aluminum phosphate adsorbed) (Co. A); triple antigen (aluminum phosphate adsorbed) (Co. A); human gamma globulin (Co. A); or typhoid-paratyphoid vaccine. Positive immunological reactions were obtained in each patient to each of these biological agents of Co. A by either direct or passive transfer tests. Since negative reactions were obtained with similar biological agents from other pharmaceutical companies, it appeared that the immunological agent itself did not act as the antigen which caused the allergic reactions.

TABLE 3.—*Results of Passive Transfer Studies in Patient in Case 2*

Test Substance	Dilution or Concentration	Passive Transfer Reaction	
		On Sites Sensitized with Serum from Patient	On Non-sensitized Sites
Tetanus toxoid, fluid, (Co. A)	1:10	+++	0
	1:1,000	±	0
Tetanus toxoid* (Co. A)	1:10	++	0
Tetanus toxoid* (Co. B)	1:10	0	0
Potassium penicillin G (Co. A)	50,000 units/ml.	0	0
Silk	0.01 mg. nitrogen/ml.	+++	0
Buffered saline solution		0	0

* Aluminum phosphate adsorbed or alum precipitated.

In response to our inquiry, Co. A stated that silk antigen might have caused the allergic reactions in the patient in case 1, since each of the biological agents he had received had been filtered through silk filters during the manufacturing process. In addition, Co. A stated that it had knowledge of two similar cases of allergic reactions to its biologicals which were proved to be due to silk.[8]

Each of the three patients in this study gave a positive direct or passive transfer reaction to silk extract. This proved that the patients were allergic to silk and that it was this antigen, present as a contaminant in the biological products, which produced the allergic reactions in these patients. It is apparent, as indicated by Co. A, that sufficient amounts of silk antigen become incorporated into the biological product as a result of filtration through silk membranes to be antigenically significant when given to a highly allergic individual.

TABLE 4.—*Results of Direct Tests on Patient in Case 3*

Test Substance	Dilution or Concentration	Reaction
Silk	0.01 mg. nitrogen/ml.	+++
Typhoid-paratyphoid vaccine (Co. A)	1:10	++++
Typhoid-paratyphoid vaccine (Co. C)	1:10	0
Tetanus toxoid* (Co. A)	1:10	+++
Tetanus toxoid* (Co. C)	1:10	0
Potassium penicillin G	50,000 units/ml.	0
Buffered saline solution		0

* Aluminum phosphate adsorbed or alum precipitated.

It is possible that other allergic reactions which have been attributed to biological agents may have, in fact, been caused by silk. We know of several other patients whose clinical histories of severe reactions to immunizing agents are quite similar to the three cases herein reported, but it has not been possible to secure from them specimens of blood for study.

It is gratifying to know that Co. A is planning to replace silk filters with other types. Until the time when silk is no longer used, a patient who has had an allergic reaction to a biological agent or who is an allergic individual with clinical manifestations of atopy should be skin tested with any biological agent, appropriately diluted, prior to its injection.

68 Rings End Rd. (Dr. Brown).

The patient in case 2 was referred for study through the courtesy of Dr. Julian Levine.

References

1. Hampton, S. F.: Anaphylactic Shock in Egg-Sensitive Individuals Following Vaccination with Typhus Vaccine: Study of Antigenic Relationship of Egg and Chicken Meat Antigens and Typhus Vaccine, J. Lab. & Clin. Med. **32:**109-117 (Feb.) 1947.

2. Cooke, R. A.; Hampton, S. F.; Sherman, W. B.; and Stull, A.: Allergy Induced by Immunization with Tetanus Toxoid, J. A. M. A. **114:**1854-1858 (May 11) 1940.

3. Werne, J., and Garrow, I.: Fatal Anaphylactic Shock: Occurrence in Identical Twins Following Second Injections of Diphtheria Toxoid and Pertussis Antigen, J. A. M. A. **131:**730-735 (June 29) 1946.

4. Coleman, M., and Siegel, B. B.: Studies in Penicillin Hypersensitivity: II. Significance of Penicillin as Contaminant, J. Allergy **26:**253-261 (May) 1955.

5. Owings, W. J. B.: Hypersensitivity to Gamma Globulin: Case Report, J. M. A. Alabama **23:**74-75 (Sept.) 1953.

6. Friedman, H. J.; Bowman, K.; Fried, R.; and Weitz, M.: Severe Allergic Reaction Caused by Silk as Contaminant in Typhoid-Paratyphoid Vaccine, J. Allergy **28:**489-493 (Nov.) 1957.

7. Rosenblum, J.: Anaphylactic Reaction to D. P. T. Vaccine Caused by Silk Antigen, to be published.

8. References 6 and 7.

V 16
1957

USE OF CITRATED CALCIUM CARBIMIDE (TEMPOSIL) IN TREATMENT OF CHRONIC ALCOHOLISM

Jackson A. Smith, M.D., Omaha, Jack A. Wolford, M.D., Ingleside, Neb., Marilyn Weber, R.N., Norfolk, Neb.
and
Dougald McLean, M.D., Omaha

A single dose of 50 mg. of citrated calcium carbimide will sensitize an individual to alcohol. After treatment with calcium carbimide, conjunctival injection, flushing of the face, headache, and dyspnea were routinely seen 5 to 10 minutes after sufficient alcohol was taken to initiate a reaction. The alcohol reaction reached a maximum in about 30 minutes and usually lasted from 60 to 90 minutes, after which the patient felt lethargic and drowsy. The most striking and reassuring observation was the infrequency with which "acetaldehyde shock" developed. In only 6 of 73 male patients were the objective findings such as to cause concern; 4 of these patients became cyanotic, one developed a generalized tremor with "chilling" and marked apprehension, and the 6th patient was a known asthmatic who became very dyspneic at the height of the reaction.

A certain sizable group of alcoholics who desire treatment have need of a medicament that would create an unpleasant but not harmful reaction if alcohol were taken, would not be addicting nor habituating, and could be safely given over a prolonged period. Ideally, such a drug would also have no undesirable side-effects. One other helpful, but not necessarily essential, attribute would be a slow rate of excretion to allow for a period of grace between the taking of the last pill and the possibility of the first drink.

Most of these qualifications are met by disulfiram. Unfortunately some alcohol–disulfiram reactions are unpredictably severe, although reports of fatal reactions have decreased rather than increased with its extensive use. Some patients experience a disagreeable odor to the breath and perspiration, impotence, lethargy, abdominal discomfort, headache, and drowsiness from disulfiram. These side-effects are usually transitory or disappear on a lower dosage, but they may offer the reluctant patient an excuse to discontinue the disulfiram in favor of a resumption of his drinking.

Ferguson's [1] report of the results of his efforts to find a drug which would "sensitize" an individual to alcohol and at the same time allow him to be free of the undesirable side-effects of disulfiram was most encouraging. He found that citrated calcium carbimide (Temposil), like disulfiram, inhibits one or more of the enzymes which are required to oxidize acetaldehyde. He also pointed out that sensitizing drugs, in addition to causing an accumulation of acetaldehyde, alter the vascular reaction to this substance. Others reported on the lack of side-effects in the alcoholic treated with therapy of citrated calcium carbimide.[2]

Method

In order to determine dosage, tolerance to the drug, and response during an alcohol test, 73 male alcoholics were given citrated calcium carbimide, and their reactions were observed during 154 alcohol tests. These alcoholics had been hospitalized from 1 to 22 times for their drinking and were all patients committed to mental institutions. They were advised that the medicament to be used was not yet approved, that its activity was similar to that of disulfiram, and that they would be expected to undergo one or more alcohol tests. They were very cooperative in carrying out this study. Electrocardiograms, complete blood cell counts, and urinalyses were done at the start. After the relative lack of cardiovascular effects during the alcohol tests was established, the electrocardiograms were discontinued.

In the alcohol test, a maximum of 2 oz. of 100 proof whiskey or 1 oz. of 95% alcohol in water was given. The reaction was similar to that seen in a disulfiram–alcohol trial. The reactions began 5 to 10 minutes after the alcohol was given. Conjunctival injection, flushing of the face, headache, and dyspnea were routinely seen when sufficient alcohol was taken to initiate a reaction. The patient usually became somewhat apprehensive, although less so than with disulfiram; a few experienced cardiac palpitation, tremor, vertigo, and drowsiness. A control reading of the blood pressure, pulse, and respiration was taken prior to the trial and at five-minute intervals for one hour or until the pretest readings were again in evidence. The alcohol reaction reached a maximum in about 30 minutes and usually lasted from 60 to 90 minutes, after which the patient felt lethargic and drowsy but was less prone to sleep than after a disulfiram–alcohol reaction. In only four instances in 154 trials did the

Director of Research, Nebraska Psychiatric Institute (Dr. Smith); Superintendent, Hastings State Hospital (Dr. Wolford); Chief Research Nurse, Norfolk State Hospital (Miss Weber); and Resident Psychiatrist, Nebraska Psychiatric Institute (Dr. McLean).

Read before the Section on Nervous and Mental Diseases at the 106th Annual Meeting of the American Medical Association, New York, June 6, 1957.

patients become nauseated and vomit, in contrast to a disulfiram–alcohol reaction in which a third or more of those tested had this experience.[3]

The most striking and reassuring observation was the infrequency with which "acetaldehyde shock" developed. In only six patients were the objective findings such as to cause concern; four of these patients became cyanotic, one developed a generalized tremor with "chilling" and marked apprehension, and the sixth patient was a known asthmatic who became very dyspneic at the height of the reaction. The cyanosis was relieved by the administration of oxygen. Four patients had a "secondary reaction" two or three hours after the termination of the alcohol test during which they experienced a recurrence of the headache and vertigo, similar to but less severe than that which occurred during the test. This "secondary reaction" lasted 45 minutes to an hour and subsided spontaneously.

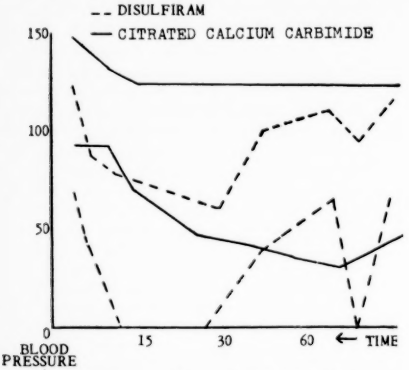


Fig. 1.–Blood pressure changes in patients with comparable reactions to citrated calcium carbimide and disulfiram.

The marked fall in blood pressure so frequently seen in disulfiram–alcohol reactions was not observed during the alcohol tests with this drug. In only 11 of the reactions did the diastolic pressure fall more than 20 mm. Hg from the control reading, and in only 3 was a diastolic reading of 50 mm. Hg or below observed; in these 3 the readings were 122/40, 118/42, and 130/46. In no instance was a systolic level below 90 observed. The blood pressure was checked in 18 patients in a supine and an erect position, and no evidence of an orthostatic hypotension was noted.

An antihistamine was given intravenously at the height of nine reactions to determine whether the symptoms would be ameliorated in a citrated calcium carbimide–alcohol reaction as they have been reported to be in a disulfiram–alcohol trial. In all nine patients the dyspnea, tightness in the chest, and the pruritis which accompanied the flushing were immediately relieved. The only other effects noted were a lessening in the degree of cutaneous flushing, nasal congestion, and headache. Since none of the patients reached a markedly hypotensive state nor had tachycardia during the reaction, no change was noted in the cardiovascular response. A comparison of the hypotensive effects of citrated calcium carbimide and disulfiram is shown in the figures.

Dosage and Side-effects

To determine the rapidity with which the individual becomes sensitized by citrated calcium carbimide, seven patients were given one 50 mg. tablet and tested one hour later with alcohol. All seven showed a typical reaction. To establish the rapidity with which this product was excreted or inactivated, the same seven were retested 24 hours later with the same quantity of alcohol, and all showed a much milder reaction. The test was repeated daily for five days, and after the third day only one patient showed any reaction to the alcohol. This patient continued to show some response for six days.

In eight patients who received 50 mg. of citrated calcium carbimide for seven days and were tested 24 hours after the last tablet was taken, no reaction occurred. This was at the beginning of the study, and it was thought that the medication either was not being absorbed or was not being taken. The tablets were subsequently given on the day of the test, and a reaction to alcohol did occur. Pulverizing the tablet did not appear to alter the severity of the reaction.

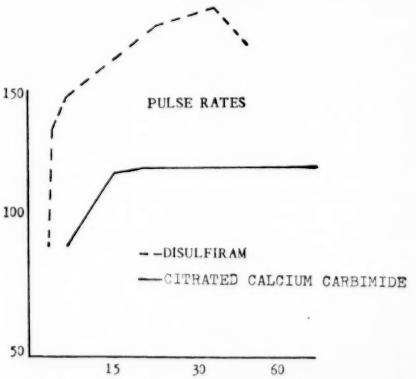


Fig. 2.–Pulse rate changes in patients with comparable reactions to citrated calcium carbimide and disulfiram.

V 16
1957

To clarify whether this drug has a cumulative effect and the effect of an increased intake, seven patients were given 50 mg. daily for seven days and tested with alcohol. The dosage was then increased to 100 mg. a day during the second week, and they were retested. The response to alcohol was only slightly more marked on the increased dosage. Five patients out of the 74 treated required 100 mg. a day to produce a reaction to 2 oz. of alcohol. One of the patients on a daily dosage of 50 mg. was found to have alcohol on his breath and was flushed when he returned to the hospital. When a higher dosage was recommended, the patient discontinued treatment. To establish whether or not tolerance to the drug developed, two patients were tested after one week and again in two months, and on both occasions a similar response occurred. In no patient was the abrupt withdrawal of citrated calcium carbimide productive of any discomfort or complaints; there was no evidence that this medication was habituating or addicting.

Four patients complained of urinary frequency during the first few days that they took citrated calcium carbimide. Repeated urinalyses in this group revealed no abnormalities. One patient said he had "poor eyesight" and another described himself as being "short of breath." No objective basis for these complaints could be demonstrated. In all six of these patients, the complaints ceased spontaneously while they were continuing to receive the medicament, and the difficulties were not attributed to the drug. There were no complaints of lethargy, abdominal discomfort, headache, or impotence in this group. Patients who had previously taken disulfiram and had experienced side-effects had no complaints while taking citrated calcium carbimide. In several who received one of the ataraxics along with the medicament there was no sign of potentiation. Complete blood cell counts were done on the first 35 patients treated, and no evidence of bone-marrow depression was found. A transitory leukocytosis to a level of 10,000 to 12,000 per cubic centimeter was found in several patients during the second and third weeks of treatment.

Summary and Conclusions

Reaction to 154 alcohol tests with citrated calcium carbimide (Temposil) were observed in 73 male alcoholics. The marked hypotensive effects frequently seen during a disulfiram–alcohol reaction were not observed. Four patients became cyanotic and were relieved by the administration of oxygen. Repeated testing of a group of 28 volunteers suggests that this drug sensitizes an individual to alcohol within one hour after it is taken, and that it is rapidly excreted or inactivated after ingestion. When alcohol is taken, an allergic type of response similar to that seen in a disulfiram–alcohol reaction occurs in 5 to 15 minutes and lasts from 60 to 90 minutes. An average daily dose of 50 mg. seems adequate, but in a few patients 100 mg. a day may be required. No undesirable side-effects which could be attributed to this drug were observed. There was no evidence of bone marrow depression after prolonged administration, but in several patients a leukocytosis did occur.

It would appear that citrated calcium carbimide has no undesirable side-effects such as lethargy, the production of impotence, and abdominal discomfort complained of by some patients who take disulfiram; too, the citrated calcium carbimide–alcohol reaction, though of comparable unpleasantness, did not show the disturbing cardiovascular effects frequently seen in disulfiram–alcohol reactions. It did appear, from this study, that citrated calcium carbimide should be taken daily to be effective, and that it is much more rapidly inactivated or excreted than disulfiram.

The repeated tests with citrated calcium carbimide were carried out to determine the toxicity of this medicament when alcohol was taken. There is little cause to believe that the discomfort of reaction from citrated calcium carbimide or disulfiram and alcohol is of itself therapeutic since alcoholics frequently undergo more unpleasant reactions after a bout of drinking without the discomfort influencing their drinking pattern in the least. The lack of disturbing cardiovascular symptoms during a citrated calcium carbimide–alcohol reaction allows this medicament to be given with little concern over the hazards of the patient's drinking while he is sensitized.

Ferguson's finding [1] that a single dose of 50 mg. of citrated calcium carbimide will sensitize an individual to alcohol and that it is excreted more rapidly than disulfiram was confirmed in this study. The effects of citrated calcium carbimide on the vascular reaction to acetaldehyde were of a different order than the previously observed reactions to disulfiram.

602 S. 44th Ave. (5) (Dr. Smith).

This study was supported in part by the Nebraska Board of Control Fund for Psychiatric Research.

The citrated calcium carbimide used in this study was supplied as Temposil by the Lederle Laboratory.

References

1. Ferguson, J. K. W.: New Drug for Alcoholism Treatment: I. New Drug for Treatment of Alcoholism, Canad. M. A. J. **74**:793-795 (May 15) 1956.

2. Armstrong, J. D., and Kerr, H. T.: New Drug for Alcoholism Treatment: II. New Protective Drug in Treatment of Alcoholism (Preliminary Clinical Trial of Citrated Calcium Carbimide), Canad. M. A. J. **74**:795-797 (May 15) 1956. Bell, R. G.: New Drug for Alcoholism Treatment: III. Clinical Trial of Citrated Calcium Carbimide, ibid. **74**:797-798 (May 15) 1956.

3. Smith, J. A.: Alcoholism, Monograph, Philadelphia, J. B. Lippincott Company, 1954.

LOCATION OF TUMOR DIAGNOSES IN A STANDARD NOMENCLATURE PUNCHED-CARD DISEASE INDEX

Crofford O. Vermillion, M.D., St. Louis

The efficiency of a tumor registry in a hospital is increased if the institution maintains a complete, current disease index that can be used for checking the registry. An index coded according to the Standard Nomenclature of Diseases and Operations and maintained on punched cards in order of code numbers can be rapidly sorted for various purposes. Cards filed in such a way as to keep types of disease together imply a scattering of the cards with respect to the location of disease, and vice versa. A linear system designed to keep cards together that are related in one sense inevitably implies that cards related in any other sense will be scattered. This difficulty practically vanishes because of the rapidity of sorting when punched cards are used. It is possible to exclude any desired category of disease conditions and to locate any desired type of patient.

Many hospitals maintain a tumor registry either because of interest and use or because of requirement by the American College of Surgeons for approval of a cancer clinic.[1] Other institutions have strongly considered the maintenance of such a registry. With the constantly growing interest in neoplastic conditions, there is reason to believe that tumor registries will become even more numerous.

One problem which has delayed spread of such registries has been the difficulty of obtaining a complete list of relevant patients. Even in some institutions with established registries this is still a large problem. In many places the primary responsibility for reporting such patients to the registry rests with the medical staff and is well accepted by them with but occasional lapses of memory. In almost every instance, it is necessary to augment this mechanism by further search for tumor patients by reviewing all surgical pathology, autopsy, and x-ray reports to make sure that patients with significant conditions are already known to the registry. In other instances, it is even the practice to review all medical records before they are placed in permanent file to determine that relevant patients are listed in the registry.

In those institutions which maintain a complete and current disease index, the location of tumor patients from such an index is more practical than other methods of checking the tumor registry. This is particularly true if the accuracy of the disease index is insured by comparing surgical pathology or autopsy reports with the final diagnosis of the record as is done in the auditing procedure of many medical records departments. Proper maintenance of a disease index requires use of uniform terminology to insure accurate statistical information and complete location of desired records. If such terminology is adopted from the Manual of International Statistical Classification of Diseases, Injuries, and Causes of Death,[2] the location of tumor diagnoses is extremely simple. With certain exceptions, the code numbers for tumors are together in one consecutive group. While some hospitals use this International Classification, its use is more common in health departments and bureaus of vital statistics. The vast majority of hospitals use Standard Nomenclature of Diseases and Operations [3] because of the more complete description and sharp definition which it affords disease entities. This complete description and the definitive nature have led to some unjustified criticism. In a Standard Nomenclature disease index maintained in numerical code number order, similar or identical entities may be widely separated. For example, basal cell carcinoma appears in many parts of the file, depending on the location of the lesion. Nevertheless, the medical records for any disease entity, regardless of its location, or even of groups of disease entities, are readily found by various methods, particularly if a punched-card system is used.

In its basic construction, Standard Nomenclature describes the topography of the disease entity in the first half of the code and the etiology of the entity in the last half of the code. The extent of the coding varies somewhat with three to five digits being used in each of the two portions of the code. The basic principle which must be remembered is that the second or etiological portion of the code must always begin in the same position. If an institution is using a four-digit topographic portion of the code, the fifth digit should always begin the etiological portion of the code. If there are only three numbers in the topographic portion of the code for the specific entity being described, the fourth position will be left blank so the etiological portion can begin in the fifth position.

Associate Director, Barnes Hospital.

V 16
1957

As long as this basic principle is observed, tumor diagnoses can readily be found in a Standard Nomenclature coding system. An "8" in the first position of the etiological portion signifies "new growth." If the diagnoses are recorded on punched cards, a machine sort on this fifth column will produce the cards for the desired patients. With the machine system that is in most widespread use, "Y" will be pulled at the same time as "8." It is thus necessary to re-sort the selected cards to eliminate "Y" cards.

Code "8" indicates "new growth" without further specification and therefore includes malignant, benign, and unspecified tumors plus leukemias and lymphomas. Since benign tumors are rarely of interest in such a registry, it is advisable to eliminate these from the selected cards. An "A" appearing as a final digit of the code number signifies such a tumor. This is most commonly in the fourth position of the etiological portion of the code. Sorting the cards on this column to select out those with an "A" will eliminate such benign tumors. In other instances the "A" may appear as the fifth digit of the etiological portion. For those institutions using such complete coding, machine sorting can also eliminate these. If only four digits are used in the etiological portion, it is necessary to examine the cases of certain code numbers individually to determine whether the entity is malignant or benign. A few code numbers can be eliminated as known benign lesions before such search is done. Fortunately the percentage of cases which need to be examined individually to determine the degree of malignancy is relatively small.

A further selection of the above cards is sometimes practical and pertinent. In those instances where leukemias, polycythemia, and so forth are of no interest to the registry, the selected cards can be sorted on the second digit of the etiological portion. Any "2" found here indicates such a disease entity. At the same time any "3" in this position can also be found, and lymphomas and myelomas can thus be separated if desired.

When the pertinent cards have been obtained in this way, they can be filed in topographic order as in most diagnostic files or in etiological order as suggested for tumor registries by Thompson and Slaughter.[4] It is preferable to have an index available in each order by reproducing the cards and sorting one deck in topographic order and the other in the etiological order. In order to reduce the space of such a file and to utilize the cards for still further purposes, the information thereon may be listed so that the cards themselves are released from use in the diagnostic file (Bradley and others[5]).

In those institutions using a unit history number system, punched-card mechanisms also have the advantage of eliminating duplicate unit history numbers in order to reduce the total cards to new accessions. A further benefit in tumor registries is the simplification of follow-up on patients. If the condition on discharge is indicated in the punched card, the code or codes for "expiration" indicate the patients for whom no further follow-up efforts are necessary. These cards should also be matched to the previously existing file at desired intervals of 3, 6, or 12 months to select patients already registered who have subsequently died. The remainder of the new cards obtained can also be matched against the existing file to locate those patients who have had a subsequent admission which was unknown to the registry. If these mechanisms of matching new cards against a previously existing file are used, the unit history number system will give a cut-off of those patients who are new additions during the current period. Thus the latter portion of the unit history number sequence need not be matched to the previously existing file, as no such numbers could exist therein.

Summary

The establishment of tumor registries and the operation of some existing ones has been handicapped by the difficulty of obtaining a complete listing of all patients relevant to the registry. Such a listing can be obtained from a diagnostic index maintained by hospitals. The location of tumor diagnoses in such an index is elementary if the coding is done according to the Manual of International Statistical Classification of Diseases, Injuries, and Causes of Death. A system is described herein for locating such diagnoses if coding according to Standard Nomenclature of Diseases and Operations is used on a punched card system. Benign lesions are largely excluded by this method, but some codes need further information from the medical record to determine degree of malignancy. Leukemias and lymphomas can be excluded if desired. Punched cards located in the system are easily filed in various ways or can be listed and released for further statistical studies. They also serve to resolve total diagnoses to accessions and to identify those patients for whom no further follow-up for a tumor registry is needed.

600 S. Kingshighway Blvd. (10).

References

1. Manual for Registries and Cancer Clinical Activities, Chicago, American College of Surgeons, 1953.

2. Manual of International Statistical Classification of Diseases, Injuries, and Causes of Death: Sixth Revision of International Lists of Diseases and Causes of Death, Adopted 1945, Geneva, World Health Organization, 1948.

3. Standard Nomenclature of Diseases and Operations, ed. 4, New York, Blakiston Company, 1952.

4. Thompson, E. T., and Slaughter, D. P.: Standard Nomenclature in Approved Cancer Clinics, J. A. M. A. **163:** 1131-1134 (March 30) 1957.

5. Bradley, F.; Vermillion, C. O.; and Anderson, W.: Medical Records on Punch Cards, Mod. Hosp. **82:**81-84 (April) 1954; ibid. **82:**83-84; 150 (May) 1954.

CLINICAL NOTES

NEOSTIGMINE THERAPY FOR APNEA OCCURRING AFTER ADMINISTRATION OF NEOMYCIN

REPORT OF A CASE

William H. Middleton, M.D., Dale D. Morgan, M.D., Cedar Rapids, Iowa
and
Jack Moyers, M.D., Iowa City

At the time of this writing only six cases of apnea occurring after the intraperitoneal administration of neomycin have been reported.[1] However, the widespread use of this antibiotic would indicate that this complication will be encountered more frequently. When apnea does occur from intraperitoneal administration of neomycin, artificial ventilation is the treatment of choice. Given adequate time, recovery will occur just as it does after curare overdosage.

Pittinger [2] has shown that, in anesthetized animals, intravenously given neomycin readily produced neuromuscular blockade and respiratory depression. Ether anesthesia appeared to potentiate this curare-like action. In these experiments neostigmine antagonized both the neuromuscular blockade and the respiratory depression produced by neomycin, and by pretreatment with neostigmine this curare-like action did not occur.

The clinical use of neostigmine in the treatment of respiratory depression from intraperitoneal administration of neomycin has not been reported, to our knowledge. In the following case it appears that neostigmine therapy did reverse the effects of neomycin. We believe that further trial of the curare antagonists in the management of this problem is indicated.

A 75-year-old male was admitted to the emergency room, St. Luke's Hospital, Cedar Rapids, Iowa, for treatment of a self-inflicted gunshot wound of the abdomen. A considerable amount of small intestine was protruding through the wound of exit in the left flank. Blood pressure was 90/60 mm. Hg. A 5% infusion of dextran was started in the emergency room, and the patient was immediately taken to the operating room.

Anesthesia was induced with 300 mg. of thiopental (Pentothal) sodium and maintained with cyclopropane. Relaxation for endotracheal intubation and surgery was afforded by succinylcholine given as a continuous intravenous infusion. Ventilation was assisted throughout the two-and-one-half-hour operative procedure of partial resection of the large intestine and closure of numerous perforations of small intestine. Administration of 1,500 cc. of whole blood was thought to be adequate. Blood pressure stabilized at 100-110 mm. Hg systolic.

Shortly before peritoneal closure, neomycin, 2 Gm., was instilled into the peritoneal cavity. Administration of succinylcholine was discontinued after peritoneal closure; a total of 350 mg. had been given. At the time of fascial suture the patient was reacting to the endotracheal tube, wrinkling his forehead, and spontaneously breathing well. About 15 minutes after the neomycin had been given, and at the time of skin closure, the blood pressure fell from 100 to 70 mm. Hg systolic and the patient became apneic. Artificial ventilation with oxygen and levarterenol (Levophed) drip were instituted. This resuscitation was continued for 90 minutes, at which time regular but very feeble respiratory excursions were noted. These efforts were then assisted for an additional 90 minutes. Air was substituted for oxygen for short periods after voluntary respiration was established, but no improvement in amplitude was observed. During this three-hour postoperative period there was no reaction to the endotracheal tube and voluntary movements of limbs and the face were absent. Blood pressure remained low unless supported with levarterenol.

Telephone consultation and discussion with one of us (J. M.) resulted in the following postulation: The apnea and hypotension had been caused by a curare-like effect of neomycin. Although a relatively small amount of neomycin had been used (2 Gm.), it was absorbed through a peritoneal cavity which had been traumatized. This allowed a rapid attainment of a high blood level of the drug. The possibility of antagonizing this curare-like effect with neostigmine was considered. Accordingly, 0.3 mg. of atropine sulfate was given intravenously. Then, 0.1-mg. doses of neostigmine were given intravenously at two-minute intervals. Respiration and blood pressure were carefully observed after each dose of neostigmine. After 0.5 mg. had been given, respiratory excursions were definitely increased and the patient was swallowing. After 1.0 mg. had been given, respiratory amplitude was essentially normal. The patient also moved his head from side to side and attempted to remove the endotracheal tube. Shortly afterwards, in the recovery room, ventilation remained normal and verbal commands were followed, but vasopressors were needed to maintain normal blood pressure. Further transfusion with whole blood was ineffective.

The patient died 23 hours after surgery was completed. Respirations remained adequate until the time of death. The terminal event was a shock-like state, which occurred when the levarterenol infusion infiltrated and could not be started quickly. Permission for an autopsy was not granted.

Summary

In a case of prolonged apnea occurring after the instillation of 2 Gm. of neomycin sulfate in solution into the peritoneal cavity of a traumatized abdomen, neostigmine therapy successfully reversed the curare-like action of the neomycin.

533 Higley Bldg. (Dr. Middleton).

V 165
1957

References

1. Pridgen, J. E.: Respiratory Arrest Thought to Be due to Intraperitoneal Neomycin, Surgery **40**:571-574 (Sept.) 1956. Poth, E. J.: Critical Analysis of Intestinal Antisepsis, J. A. M. A. **163**:1317-1322 (April 13) 1957. Case Report, American Society of Anesthesiologists, Newsletter **21**:38-40 (Feb.) 1957. Webber, B. M.: Respiratory Arrest Following Intraperitoneal Administration of Neomycin, A. M. A. Arch. Surg. **75**:174-176 (Aug.) 1957.

2. Pittinger, C. B., and Long, J. P.: Danger of Intraperitoneal Neomycin During Ether Anesthesia, Surgery, to be published. Pittinger, C. B., and Long, J. P.: Neuromuscular Blocking Action of Neomycin Sulfate, Antibiotics & Chemother., to be published.

SPECIAL ARTICLE

SPECTROGRAPHIC STUDY OF TRACE ELEMENTS IN CANCEROUS AND NONCANCEROUS HUMAN TISSUES

Norbert W. Tietz, Ph.D., Edwin F. Hirsch, M.D., Ph.D.
and
Benjamin Neyman, Ph.D., Chicago

The etiological relationship of specific metals and their compounds to neoplasia has not seemed as important a field of investigation as has that of a number of organic compounds, especially the volatile coal-tar products of industry. Barnett [1] reported carcinoma of the nasal passages, paranasal sinuses, and lungs among workers in nickel refineries. The incidence of carcinoma of the lung with exposure to chromates has been mentioned by Hueper and others,[2] and a high content of molybdenum,[2e] zinc,[3] and other metals in tumor or host tissues has been recorded.[4]

Some metals and their compounds, even when present in large amounts in the tissues, have no recognized carcinogenic properties; others, such as copper and iron, which are selectively stored in the liver and spleen of patients with tumor tissues [5] are not regarded as having a causal relation to the disease. Among the metals and their compounds with real or suspected carcinogenic properties are arsenic, chromium, molybdenum, nickel, cobalt, aluminum, beryllium, cadmium, silver, selenium, zinc,[6] and, of course, the metals with radioactive properties.[7]

Findings on Carcinogenic Properties of Metals in Test Animals

After the presence of increased amounts of certain metals had been demonstrated in the tumor or other tissues of the tumor-bearing host, the carcinogenic properties of some metals were investigated in test animals. The results and the opinions expressed by various authors are briefly stated in the following paragraphs.

From the Henry Baird Favill Laboratory, Presbyterian-St. Luke's Hospital. At the time of this study Drs. Tietz and Neyman were Seymour Coman Fellows of the Department of Pathology, University of Chicago; Dr. Tietz is now at Reid Memorial Hospital, Department of Chemistry, Richmond, Ind.

Read in part at the International Congress on Clinical Chemistry, Stockholm, Aug. 19-23, 1957.

Arsenic.—Arsenic has been credited as a carcinogen by Haddow and Kon,[6b] Goeckerman and Wilhelm,[4c] Hueper,[8] Neubauer,[4f] and Steiner.[4b] Hueper [6d] reported a low percentage of cancer in animals after injections of metallic arsenic in lanolin.

Chromium.—Schinz and Uehlinger [9] produced local tumors with metastases into the lungs by intrafemoral implants of chromium. Among 25 rats injected intraperitoneally or intrafemorally with chromium, Hueper [6g] observed 3 with spindle cell sarcomas and one with an insuloma. Single implants and repeated depositions of powdered metallic chromium and chromate ore into the femur, the peritoneum, the pleura, the paranasal sinuses, and the skeletal muscle, and intravascular injections in mice, rats, guinea pigs, rabbits, and dogs, according to Hueper,[6g] produced relatively few tumors. Among the human carcinogens, Steiner [4b] listed sodium chromate and chromate dyes, and he mentioned the development of carcinoma of the lungs after the inhalation of chromates.

Nickel.—Subcutaneous, pleural, femoral, and other parenteral injections of nickel (Hueper [10]) produced in rats a variety of sarcomas. Steiner [4b] and Hueper [6i] reported the production of cancer with nickel carbonyl.

Cobalt.—Heath [4d] described local growths in rabbits with intramuscular implants of cobalt; Schinz and Uehlinger [9] observed local and lung growths in rabbits with intrafemoral implants of cobalt.

Aluminum.—Spira [4g] and also Betts [6k] consider aluminum among the carcinogens.

Beryllium.—Although the parenteral administration of beryllium (Hueper [6d]) suspended in lanolin did not clearly cause tumors, intravenous injections of beryllium in rabbits caused sarcomas of bones, and inhalations in rats produced bronchogenic carcinoma.[11] According to Stewart [6k] only the relatively insoluble compounds of beryllium are active.

Silver.—The carcinogenic property of silver had not been established until Oppenheimer and others [6u] produced local sarcomas in rodents with silver foil. Growth-promoting effects have been observed by Guyer and Mohs [6v] and Walbum.[6w]

Mercury.—Recently Druckrey, Hamperl, and Schmähl [6x] established the carcinogenic property of metallic mercury.

Copper.—Solutions of copper sulfate caused teratoid tumors in roosters.[6y]

Lead.—Two per cent lead phosphate suspensions injected subcutaneously caused carcinoma of the kidney in rats.[41]

Background of Present Study

These comments on the relation of metals and their compounds to the growth of cancer and other neoplasms suggested further investigations. Among these were analyses for the presence and amounts of metals or elements in various tissues of the human body in health and in diseases not neoplastic, for the purpose of comparison with those of cancerous and other noncancerous host tissues. Such analyses also may reveal the tolerance of tissues against a carcinogenic element. Relatively few qualitative and quantitative investigations of this kind have been made. This probably is due to the need for a technique of analysis which yields a broad pattern of the elements present, which the spectrograph fulfills. Quantitative chemical methods, when indicated, can be applied after the presence of a specific element has been determined.

Reports on the application of the spectrograph to tissue analyses record results for only a limited number of patients and a small number of chemical elements.[12] Nearly all reports give a range of concentration of the elements without separating those of the cancerous from the noncancerous tissues. Some of the average values reported by investigators appear too high because they include the analyses of tissues obviously high in metal content.

The data of the tissue analyses in our report of patients having neoplastic, inflammatory, and various other diseases are listed in separate categories. But even with this separation a "normal value" in each category could be misleading because a metal concentration found in a patient without a cancerous disease, given proper time in the same or another host, might produce a growth of tumor tissues. A commonly accepted principle holds that the body cannot eliminate, or but slowly eliminates, insoluble metals or their compounds and that these metals and compounds, therefore, will remain in the tissues for long periods of time.

The spectrographic approach provides an analytical method for the determination of many elements with reasonable accuracy in samples of tissues. Among the methods of spectrographic analysis published, the one by Butt and associates [12c] seemed best adapted to the problem.

Equipment and Methods

Spectrograph, Densitometer, and Film.—The analyses were made with an 1.5-m. emission spectrograph having a multisource power supply (model 6200 Applied Research Laboratories, Inc., Glendale, Calif.), and the lines on the films were read with the densitometer provided as part of the equipment. The spectrograph has a camera for a 35-mm. film. The S.A. no. 1 film was calibrated with the two-step camera filter.

Electrodes.—The electrodes were of high-purity special graphite (National Carbon Product) and 6 mm. in diameter. The arcing surface of the upper electrode was prepared by cutting a beveled shoulder with a cone-tip electrode tool, and finishing with a center-post cutter. These procedures formed a center post 2 mm. in diameter and 3 mm. high. The same result can be obtained with the center-post cutter and breaking away the marginal carbon. This electrode surface gave a steady arc with minimal migration during the analysis. The lower electrode was type 103, United Carbon Product, Inc., with a cup 6 mm. deep and 4 mm. in diameter. These electrodes accomplished a more satisfactory excitation of the undissolved compounds in the test sample.

Tissues and Preparation for Analysis.—The tissues were obtained from the bodies of deceased persons by autopsy and from patients by surgery. The tissues were collected in bottles carefully cleaned with diluted nitric acid. The preparation of the samples for analysis, that is, the weighing, grinding, drying, ashing, and dissolving in the internal standard-buffer solution; the preparation of the internal standard solution; the calibration of the film; the plotting of the standard curves; and other details of the procedure were carried out, in general, as described by Butt and others.[12c]

Some changes in this procedure were required in order to include more elements, some of which (Ag, Si) were insoluble in the internal standard-buffer solution, and many varied in the sensitivity of their lines. These modifications are as follows:

1. Each sample required two spectrographic analyses, the one with the filter in position 2 (Si, Al, Mn, Fe, Pb, Sn, Cr, Zn, and Ag) and the other with the filter in position 1 (Cd, Be, Mo, and Ni), in order to obtain a more adequate intensity of the lines in the film.

2. The time of arcing with the filter in position 2 was increased from 17 to 23 seconds, using an 8-ampere D.C. arc (capacitance 57 microfarads, resistance 15 ohms, inductance 350 microhenries).

3. Specific types of electrodes were used (see section on electrodes).

4. The samples were ashed with the addition of a few drops of concentrated sulfuric acid to minimize the loss of metals by volatilization.

5. The arc gap was set to 2 mm.

V 16
1957

6. Because the presence of relatively large amounts of iron and aluminum affects the intensity of the lines of other elements in the film, a synthetic model was prepared with known amounts of the elements and varying amounts of iron and aluminum. With this, a correction curve was prepared and applied in determining the standard curves.

TABLE 1.—*Spectrum Lines Used for Identification and Quantitative Estimation of Elements in Tissue Samples*

Element	Analysis Line	Internal Standard Line (Bismuth)	Filter	Remarks
Cd	2288.0	2276.6	1	
Be	2348.6	2276.6	1	
Si	2528.5	2663.3	2	
Al	2575.1	2663.3	2	
Mn	2798.2	2663.3	2	
Fe	2832.4	2663.3	2	For low concentrations
Fe	2838.1	2663.3	2	For high concentrations
Pb	2833.0	2663.3	2	
Sn	2839.9	2663.3	2	
Cr	3014.9	2663.3	2	
Mo	3132.5	2276.6	1	
Zn	3282.3	2663.3	2	For high concentrations
Zn	3345.0	2663.3	2	For low concentrations
Ag	3382.9	2663.3	2	
Ni	3414.7	2276.6	1	

The analysis lines used for the identification and quantitative estimation of the elements in the tissue samples are listed in table 1. For certain elements (Cd, Be, Ni, Mo) a different internal standard line (2276.6) was used.

Results

The outlined procedures for spectrographic analysis enabled an analysis of the tissues for 13 different elements, 6 of them quantitative analyses (Mn, Sn, Pb, Fe, Zn, and Al) and 5 of them semiquantitative (Cd, Be, Mo, Ni, and Cr). The analyses of the latter were considered to be semiquantitative because a decrease of density of the lines of elements in trace amounts by elements in relatively high amounts, as mentioned, cannot be controlled accurately. The background correction for the faint lines, especially, introduces some error, but these results are expected to vary not more than ± 15 to 25%. This seemed sufficiently accurate, since the content of metals in the various tissues had a wide range. Silver and silicon are reported only in relative amounts because of difficulties in the standardization of these elements which result from precipitation of silver by the chloride ion of the internal standard solution and the insolubility of silicon dioxide. The elevated or high values of silver and silicon therefore are reported in the tables on the basis of the intensity ratio.

Lungs.—Tables 2A-E record the results of analyses of primary carcinoma tissues and the surrounding lung tissues (table 2A); metastatic carcinoma and the associated noncancerous lung tissues (table 2B); several lung tissues of patients with carcinoma in other viscera (table 2C); a small number of lung tissues from patients with chronic inflammatory disorders (table 2D); and lung tissues of patients with a wide range of non-neoplastic diseases (table 2E). The condensed results are given in tables 2a and 2b.

A comparison of the percentage of patients having neoplastic diseases and whose lung tissues had an elevated or a high metal content with the percentages of patients having (1) inflammatory and (2) other nonspecific diseases and whose lung tissue had a high metal content discloses the relations shown in table 2b.

In table 2b, amounts of Pb, Cd, Fe, Cr, Si, and Ag are definitely increased in a high percentage of patients with neoplastic diseases. This may indicate a causal relation to neoplasia, especially since some of these metals have been described as carcinogens. There is also a significant difference between patients with various diseases and those with inflammatory disorders of the lungs. The number of the latter patients with an elevated metal content of the lungs is, on the average, about three times higher than that of the first group.

TABLE 2b.—*Percentage of Patients with Elevated or High Amounts of Elements in Lung Tissues*

Type of Disease	Elements											
	Mn	Sn	Pb	Fe	Zn	Al	Cd	Be	Mo	Cr	Ni	Si	Ag
Non-neoplastic disease	3	16	5	14	16	19	13	3	3	11	6	13	3
Neoplastic disease	3	20	14	29	14	26	27	3	3	31	5	34	39
Inflammatory disease	38	29	38	38	13	50	29	13	14	25	29	50	75

The detailed table (2E) containing the values for the elements present in the lungs of patients with various disorders other than carcinoma and inflammatory diseases records a wide range in which the elements are present in the lung tissues. Thus chromium may vary from 0.2 to 5.3 mg. per 100 Gm. of dry tissue (table 2E, specimen 5), cadmium from less than 0.1 to 1.9 mg. per 100 Gm. of dry tissue (table 2E, specimen 19), and aluminum

TABLE 2a.—*Interpretation of Metal Content in Analyses of Lung Tissues*

Values*	Elements, Mg./100 Gm. of Dry Tissue										
	Mn	Sn	Pb	Fe	Zn	Al	Cd	Be	Mo	Cr	Ni
Low	0-0.39	0-0.99	0-0.69	0-149	0-11	0-13	0-0.49	0-0.39	0-0.30	0-0.49	0-0.3
Elevated	0.4-0.99	1.0-3.0	0.7-1.0	150-250	12-20	14-20	0.5-1.0	0.4-1.0	0.31 and over	0.5-0.99	0.31-0.6
High	1.0 and over	Over 3.0	Over 1.0	Over 250	Over 20	Over 20	Over 1.0	Over 1.0	...	Over 1.0	Over 0.6

* "Low," values that can be regarded as normal; "elevated," values that could be pathogenic; "high," values abnormally high, and probably toxic in relation to the duration of tissue exposure.

from 4 to 40 mg. per 100 Gm. of dry tissue (table 2E, specimen 13). This may indicate that the absolute amount of metal present is not the only factor, but that others have significance, such as the nature of the compound, the duration of action, and the resistance of the tissues against the compound.

Metals or their compounds have been introduced into test animals, and several investigators have observed tumors in viscera other than at the site of the implant.[13] Elements, such as these, which do not cause a local growth usually have been implanted as metals or their oxides. In our analyses, patients whose lung tissues had a high metal content frequently had tumors in other viscera of the body. This suggests that a noxious agent, in order to effect tissue growth, is present in a diffusible ionic state, at least in some instances. The lungs and gastrointestinal tract are probably the most frequent portals of entry into the body for the various metals. Mine workers and others probably inhale the metal or its oxide into the lungs. Trace amounts of these, converted into the ionic state, are continuously carried by the tissue fluids into other tissues. This process is minimized when metals and their compounds are encapsulated by scar tissues in the lungs.

A comparison of the results of the analyses of the carcinoma tissues of the lungs with those of the surrounding lung tissues (tables 2A and B) discloses that almost always the content of the checked metals is lower in the cancerous tissues than in the lung tissues around the tumor. This eliminates the possibility of selective storage of these elements by the carcinoma tissues.

These chemical relations with metastatic carcinomas of the lungs are like those with the primary carcinoma. Carcinoma tissues, however, have a higher content of some elements, such as K, P, and S, than do the basic lung tissues. Perhaps these elements have no causal relation with neoplasia but are necessary for the rapid growth of the tumor tissues. With inflammatory lesions of the lungs, the results are in the reverse relations. Here most of the elements are in higher amounts in the scar tissues than they are in the surrounding lung tissues.

Liver.—The results of the spectrographic analyses of the liver tissues from patients with primary and metastatic carcinoma and of liver tissues from patients without metastases but with carcinoma elsewhere are listed in table 3A, B, and C. Table 3D records for comparison the analyses of liver tissues of patients with a large variety of non-neoplastic disorders, including traumatic injuries. The condensed results are given in tables 3a and b. The estimations of low, elevated, or high metal content in the liver as we interpreted these values are given in table 3a. They are based on the same factors that were mentioned in connection with the lung analyses.

TABLE 3a.—*Interpretation of Metal Content in Analysis of Liver Tissues*

	Elements, Mg./100 Gm. of Dry Tissue										
Values*	Mn	Sn	Pb	Fe	Zn	Al	Cd	Be	Mo	Cr	Ni
Low	0-0.89	0-0.89	0-0.80	0-99	0-65	0-15	0-1.19	0-0.29	0-0.99	0-0.40	0-0.2
Elevated	0.9-1.5	0.9-1.5	0.81-1.3	100-200	Over 65	Over 15	1.2-2.0	0.4-0.99	1.0-2.0	0.41-1.0	Over 0.2
High	Over 1.5	Over 1.5	Over 1.3	Over 200	...	...	Over 2.0	Over 1.0	Over 2.0	Over 1.0	...

* "Low," values that can be regarded as normal; "elevated," values that could be pathogenic; "high," values abnormally high, and probably toxic in relation to the duration of tissue exposure.

Table 3b compares the percentages of patients with elevated or high contents of elements in neoplastic and various non-neoplastic diseases. Amounts of Mn, Pb, Fe, Be, Cr, Ni, Si, and Ag are definitely increased in the liver tissues in patients with neoplastic diseases, although this difference in some elements is not as obvious as in the lung.

A comparison of the analyses of the carcinoma tissues in the liver with those of the liver tissues around the tumor discloses the same contrasts as in the lung, namely, that the content of various metals is lower in the carcinoma tissues than in the surrounding liver tissues.

Kidney.—The function of the kidney is chiefly excretory. This probably is the reason why the tissue analyses in both neoplastic and non-neoplastic diseases are within a fairly narrow range. The elements significantly high with neoplasia, as compared with non-neoplastic diseases, are Mo, Cr, and Ag. Although the content of these elements was elevated or high, the kidney tissues were not cancerous. The results do not justify the conclusion that kidney tissues have a specially high resistance to neoplasia. However, the elevated values afford some information of the distribution of these metals in the tissues of the body. The amount of cadmium is relatively high in all kidney tissues in comparison with other viscera. Most kidney tissues had more than 5 mg. of cadmium per 100 Gm. of dry tissue. In the lung 0.5 mg. and in the liver 1.2 mg. of cadmium per 100 Gm. of dry weight were considered elevated values. Because the spectrographic procedures as outlined did not yield exact quantitative

TABLE 3b.—*Percentage of Patients with Elevated or High Amounts of Elements in Liver Tissues*

	Elements												
Type of Disease	Mn	Sn	Pb	Fe	Zn	Al	Cd	Be	Mo	Cr	Ni	Si	Ag
Non-neoplastic disease	14	15	18	16	0	4	35	6	10	3	0	15	12
Neoplastic disease	35	14	52	30	0	0	36	9	5	23	5	23	23

V 16
1957

analysis above the 5 mg. amount, differences in the amounts of this metal in neoplastic and non-neoplastic diseases were not established.

Tables 4A and B record the details of analyses. The condensed results are given in tables 4a and b.

The high content of metals in the tissues of patients with metastatic carcinoma has been considered by some authors to be due to a secondary storage following the development of the disease. However, our studies suggest that the increase in

TABLE 4a.—*Interpretation of Metal Content in Analysis of Kidney Tissue*

Values*	Elements, Mg./100 Gm. of Dry Tissue										
	Mn	Sn	Pb	Fe	Zn	Al	Cd	Be	Mo	Cr	Ni
Low	0-0.69	0-0.80	0-0.80	0-100	0-50	0-10	0->5	0-0.25	0-0.25	0-0.49	0-0.15
Elevated	0.7-1.5	0.81-1.49	0.81-1.5	101-200	51-100	11-15	?	0.26-0.5	0.26-0.5	0.5-1.0	0.15-0.5
High	Over 1.5	Over 1.5	Over 1.5	Over 200	Over 100	Over 15	...	Over 0.5	Over 0.5	Over 1.0	Over 0.5

* "Low," values that can be regarded as normal; "elevated," values that could be pathogenic; "high," values abnormally high, and probably toxic in relation to the duration of tissue exposure.

Comment

The experiments by Schinz [9] in 1942 demonstrated the carcinogenic properties of metals or their compounds. Prior to this, large amounts of several metals had been reported in a variety of tumors and in tissues of tumor-bearing hosts.[14] Many of these findings were in the tissues of miners, where a large content of the metals had accumulated gradually during years of exposure. All reports on carcinogenesis with metals emphasize the requirement of a long period of exposure. This long latent period reasonably explains why the carcinogenic property

TABLE 4b.—*Percentage of Patients with Elevated or High Amounts of Elements in Kidney Tissues*

Type of Disease	Elements											
	Mn	Sn	Pb	Fe	Zn	Al	Cd	Be	Mo	Cr	Ni	Si	Ag
Non-neoplastic disease	5	6	10	5	0	0	0?	3	6	3	3	4	4
Neoplastic disease	4	9	8	4	4	0	0?	0	17	21	9	14	24

of certain metals was not recognized sooner. Mancuso [15] in 1951 emphasized the long latency of metallic action, and Hueper (1953) [61] remarked that the latent period is seldom less than 5 years and may be longer than 25. Others have recorded similar opinions.[9] Araki and Mure [48] reported a gradual increase of nickel in tissues with age. An average value for nickel in persons up to 31 years of age was 0.285 mg. per kilogram of fresh human tissue, but in those over 51 years the amount was 1.525 mg. per kilogram. These differences in metal content according to age explain, in part, the wide range of values reported for different tissues.

metals occurs prior to the growth of the tumor. An increase in the amounts of the metals in the tissues of cancerous patients is observed not only in the tissues in which the carcinoma is primary but also in the lung, liver, and kidney regardless of metastatic growths. Examples of this are shown in table 5, especially line 1, where the amount of chromium is elevated in the lung, liver, and kidney, and line 8, where the amount of nickel is elevated in all three tissues. Also suggesting a storage prior to the disease is the fact that the carcinoma tissues themselves have a much smaller amount of these metals than has the surrounding tissue.

The elements commonly elevated or high in the liver, lung, and kidney of patients with neoplastic diseases are Pb, Fe, Cd, Cr, Ag, and Si. In addition, amounts of manganese and beryllium also are elevated in the liver and molybdenum in the kidney.

Chromium, found in elevated amounts in the lung tissues and especially in the liver of patients with cancerous diseases, is a known carcinogen. Lead, beryllium, and silver are credited with similar properties. This action has not been established with manganese, molybdenum, cadmium, and silicon. The analyses of lung tissues from patients with inflammatory disorders demonstrated a high percentage with an elevated content of several ele-

TABLE 5.—*Examples of Distribution of Elements in Various Organs of Patients with Neoplastic Diseases*

Line No.	Primary Site	Lung			Liver			Kidney		
		Table	Specimen No.	Elements Elevated or High	Table	Specimen No.	Elements Elevated or High	Table	Specimen No.	Elements Elevated or High
1	Mammary gland	3B	1	Cr	3C	4	Cr	4A	5	Cr
2	Lung	2A	10	Cd	3B	5	Cd			
3	Jejunum	2C	12	Pb	3C	5	Pb			
4	Liver				3A	2	Mn	4A	20	Mn
5	Esophagus	2C	7	Pb,Cd,Ag	3C	6	Pb,Cd,Ag,Sn	4A	9	Sn,Pb
6	Colon	2C	2	Cr	3C	7	Cr	4A	3	Cr
7	Pancreas	2C	5	Mn,Pb,Fe,Cd,Cr	3C	8	Mn,Pb,Fe,Cd			
8	Brain glioma	2C	6	Cd,Ni	3C	9	Cd,Ni,Cr	4A	7	Ni,Cd (?)

ments. Among these are beryllium and silicon, both recognized as noxious agents.[16] The relation of chronic inflammation to neoplasia is an accepted principle. Should elements be selectively stored in inflammatory tissues, they still could be a positive factor in the development of a cancerous growth.

Our analyses are of tissues obtained in the Chicago area. Investigations in other geographical sites may yield different results, depending upon the metallic or nonmetallic compounds to which the inhabitants are exposed. Addink,[3a] for example, reported high values for zinc in cancer patients in Holland. Our results are recorded with the hope that they will be useful in further studies on the relation of specific metals to carcinogenesis.

Summary

Autopsy and biopsy tissues of the lung, the liver, and the kidney were analyzed with the spectrograph for their content of the elements Mn, Sn, Pb, Fe, Zn, Al, Cd, Be, Mo, Ni, Cr, Si, and Ag.

The results for the lung tissues were separated into several groups: (*a*) primary carcinoma tissues and surrounding lung tissues (*b*) metastatic carcinoma tissues and the noncancerous lung tissues, (*c*) lung tissues of patients with carcinoma in other viscera, (*d*) lung tissues of patients with chronic inflammatory disorders, and (*e*) lung tissues of patients with a wide range of non-neoplastic diseases. A comparison of these analyses discloses that amounts of Pb, Cd, Fe, Cr, Si, and Ag are more often increased with neoplastic and inflammatory diseases than in the tissues of patients without cancer. Even in patients with various diseases, there is a wide range in results.

The analyses of liver tissues show a significantly higher content of Mn, Pb, Fe, Be, Cr, Ni, Si, and Ag in those from patients with neoplastic diseases regardless of the primary site. The elements significantly high in kidney tissues of patients with neoplastic diseases are Mo, Cr, and Ag. Almost all kidney tissues without regard to the disease have a higher content of cadmium than the lung and liver tissues.

The high content of elements not only in one organ tissue of patients with neoplasia but in three (that is, the lung, the liver, and the kidney) suggests that the storage of metals took place prior to the development of the disease rather than after. The observation that the metal content in the tumor tissue itself is definitely lower than that of the surrounding host tissue supports this opinion.

The tissues analyzed have been obtained in the Chicago area. Similar studies in other geographical sites may yield different results depending upon the compounds to which the inhabitants are exposed.

1439 S. Michigan Ave. (5) (Dr. Hirsch).

The bibliographic references and tables 2A-C, 3A-D, and 4A and B have been omitted from THE JOURNAL but will be included in the authors' reprints.

This study was aided by a grant from the Illinois Division of the American Cancer Society.

Dr. Richard Nailor gave technical assistance in this study.

The spectrograph used was a gift to the Henry Baird Favill Laboratory from the Women's Board of St. Luke's Hospital.

V 165
1957

Spider Bites.—In California it is generally conceded that *Latrodectus mactans* (Fabricius), the black widow, is the only spider dangerously venomous to man. The fairly common reports by persons not versed in the subject, of cases of less severe spider bites, in which the arthropod is not available for identification, are usually attributed to the black widow spider or to stings or bites from various insects such as bees, wasps, scorpions or kissing bugs. Hence it is of particular interest to record a decidedly venomous effect from the bite of a common North American spider previously regarded as harmless. . . . The spider was identified by Dr. Willis J. Gertsch of the American Museum of Natural History as an immature male of *Cheiracanthium inclusum* Hentz, of the family Clubionidae. It is an inconspicuous, pale yellow spider, less than one quarter of an inch long. In view of its wide occurrence throughout North and South America and its frequent appearances in houses, it is surprising that there are no previous records of its biting man. . . . Dr. Gertsch said that the bite of the genus *Cheiracanthium* has been observed to be not completely inoffensive. The bite of the European *Cheiracanthium punctorium* (Villers) causes pain comparable to the sting of a wasp, sometimes associated with fever and other symptoms. Similarly spiders of the species *Cheiracanthium diversum* L. Koch, in the Hawaiian Islands, have bitten a number of persons, causing moderate to grave symptoms. . . . The alarming and excruciatingly painful reaction indicates that closer scrutiny should be given to other reports of spider-bite injury. The fact that the black widow appears to be the only dangerously venomous spider in California does not preclude the probability that the bites of other spiders may cause considerable injury.—D. P. Furman, Ph.D., and W. C. Reeves, Ph.D., Toxic Bite of a Spider: Cheiracanthium Inclusum Hentz, *California Medicine*, August, 1957.

DIAGNOSTIC PROBLEMS

PAINFUL KNEE, DROP FOOT, AND HEMOPTYSIS

Clinical Pathologic Conference (PM 565-55) March 21, 1957, from the Department of Pathology and the Hektoen Institute for Medical Research of Cook County Hospital, Chicago, presented for publication by Daniel S. Kushner, M.D., and Paul Szanto, M.D.

Clinical Data and Discussion

Dr. Sheldon Waldstein: A 39-year-old Negress was admitted to the orthopedic service with a painful left knee. At the age of 15, she injured her left knee, which swelled but healed without difficulty; however, at times of minor trauma it would swell again. From the age of 15 to 37, she was well. She had four pregnancies and delivered two children, one of whom died. At age 38 (16 months prior to her final admission) she noted pain, numbness, and weakness of the left ankle, and shortly thereafter drop foot developed. One would immediately think of peroneal nerve palsy. This is one of the peripheral nerve palsies in which the cause of paralysis is often not known, and many patients give no history other than the occurrence of paralysis after crossing the legs. The peroneal nerve lies in an exposed position and is subjected to many types of minor trauma which may lead to paralysis. However, in this case, great pain preceded the paralysis. We do not know what type of treatment she sought, but 13 months before admission and 3 months after the occurrence of drop foot, she was admitted with an incomplete abortion and a curettage was done. Her left leg showed drop foot, loss of pain sensation over the anterior surface of the foot and lateral aspect of the leg up to the knee, loss of vibration sense over the lateral malleolus, and loss of proprioception in the foot, compatible with peroneal nerve palsy. The Achilles tendon reflex was absent, but the patellar reflex was present. An electromyogram confirmed the presence of a peripheral neuropathy. The day after the dilatation and curettage, thrombophlebitis developed in the left calf. This is not unusual after operation, particularly a gynecologic one, but it is of interest that this occurred in the portion of the lower extremity where she had previously had difficulty. Perhaps this was because the leg was paretic. At any rate she received anticoagulant therapy and was discharged 16 days later.

Dr. Kushner is Associate Director of Medical Education, Cook County Hospital, and Instructor in Medicine, Northwestern University Medical School; Dr. Szanto is Director, Department of Pathology, Cook County Hospital, and Associate Professor of Pathology, Chicago Medical School.

Dr. Waldstein is Attending Physician, Cook County Hospital, and Associate in Medicine, Northwestern University Medical School.

The urine was normal. Roentgenograms of the abdomen revealed a calcified density, 8 cm. in diameter, in the inlet of the pelvis, and we will consider that a calcified fibroid may have been the reason for the abortion. Views of the spine and left knee were negative.

Two months later, 11 months before her last admission, she returned with an edematous, cold left leg. This would be compatible with residual thrombophlebitis as she probably had some venous insufficiency, but now the popliteal and dorsalis pedis arteries were not palpable and the leg was cold. Could a process which first involved the nerve and then the vein now include the artery? Her blood pressure was 144/96 mm. Hg. She improved rapidly and was discharged 10 days later.

For six months she was well. Five months prior to her last admission, she had pain in the left knee, of progressive severity, with swelling and difficulty in walking. She consulted a physician who gave her 18 injections of streptomycin, presumably for a tuberculous arthritis. Two weeks before admission, she got her first constitutional symptoms, described as "flu." She complained of cough, hemoptysis, pain in the left side of the chest, anorexia, and nausea. She was again admitted to the hospital. The pain in the knee so outweighed her other complaints that she went to the orthopedic service. She did not appear very ill, but she was unable to walk due to a swollen, painful knee. The findings were as before, with nerve palsy and absence of arterial pulsation, but, in addition, the left knee was locked in a flexed position. The knee was warm, tender, and markedly swollen. Her pulse rate was 128 per minute, but she had no fever. Dyspnea was not noted on admission, but throughout the remainder of her course dyspnea and respiratory insufficiency were outstanding. Her heart was normal, but her blood pressure was elevated to 170/110 mm. Hg. There were signs of left pleural effusion. Her uterus was irregularly enlarged, consistent with a diagnosis of fibroids. The adnexa were normal.

The patient was troubled with cough and nocturnal dyspnea requiring her to sit up most of the night. Two days after admission, a diagnostic and therapeutic left thoracentesis was performed, yielding 500 cc. of bloody pleural fluid which did not

clot. The aspiration gave her no relief and her pulse rate remained about 140. Bacterial and acid-fast cultures of the fluid were sterile, and the tuberculin test was negative (1:100).

Roentgenograms were taken immediately after the tap. Not only was massive effusion found, but the mediastinum was shifted to the right and in the right lung numerous patches of infiltration were seen. The urine was negative. The blood showed a moderate normochromic anemia with a normal leukocyte count. The nonprotein nitrogen and total protein levels were normal and a serologic test for syphilis was negative. Circulation time was normal. With a normal heart, absence of generalized edema, absence of basilar rales, and a normal circulation time, heart failure could be ruled out. She did, however, have high venous pressure which was determined in the arm only and which I believe was due to a kinking and torsion of the vena cava, because of the shift of the mediastinum to the right, rather than to congestive heart failure.

Roentgenograms of the knee showed little. There was irregularity of the medial plateau which either dates back to the previous injury or could point to some new process. There was some osteoporosis, which is not surprising in view of the long-standing nerve damage and atrophy of disuse, but a tuberculous joint might give similar findings.

The patient was still dyspneic and, on successive days, thoracentesis yielded 800 cc. and 750 cc. of bloody fluid. While she may have had 2,000 cc. to begin with, I would say this is a rapid reaccumulation of bloody pleural effusion. Later she was faint and shaky; dyspnea, tachypnea, and tachycardia persisted. She died 10 days after the last tap and 16 days after admission.

Before we consider the differential diagnosis, could we see the roentgenograms?

Dr. Hildegarde Schorsch: Roentgenograms of both feet, taken on her first admission, showed only a slight osteoporosis of the left as compared to the right foot. Those of the lumbar spine were negative. A roentgenogram of the chest taken on admission showed massive effusion on the left side with marked displacement of the heart and mediastinum and patchy densities in the right lung, suggesting congestion secondary to effusion. A film taken the day following thoracentesis showed normal heart size and a small pneumothorax. The patchy densities on the right side had decreased but were still present, as was the effusion. A film taken five days later still showed the pneumothorax and more fluid in the lower half of the left lung field than on the previous examination, somewhat less prominent vascular markings, and hydropneumothorax with pulmonary congestion on the right side. Roentgenograms of the pelvis showed a large, mottled, calcified discrete density which could be a calcified fibroid. In addition, there was an old fracture in the inferior ramus of the left pubis and possibly one on the other side too. A single view of the left knee was normal.

Dr. Waldstein: I think this illustrates that one look is worth many words. I had the impression that the infiltration of the lungs was prominent and constant, but the films would indicate that a good bit is on the basis of congestion. At any rate, I shall approach this from a consideration of what might cause the bloody pleural effusion associated with cough and hemoptysis, because to my mind this is what the patient died from. Leuallen and Carr [1] reported a study of 450 cases of pleural effusion in which the most frequent causes were carcinoma (primary or metastatic), tuberculosis, congestive heart failure, and pulmonary embolism. There is always the problem of traumatic hemothorax, but in this instance we need not consider trauma as we have no history of it, nor was this a true hemothorax. The authors found that the amount of blood present does not help one to differentiate between carcinoma and tuberculosis, since tuberculosis may also produce massive bleeding. Carcinoma, however, far outweighs tuberculosis as a cause of massive bloody effusion. In another study of bloody pleural effusion, it was shown that in the vast majority of middle-aged people, the effusion was due to carcinoma.

Let us first consider pulmonary embolism. We could almost make out a case for it. Many cases have been presented here with a history of respiratory insufficiency and at post mortem one finds multiple small pulmonary emboli which have led to vascular changes in the lungs and pulmonary hypertension, with death usually from cor pulmonale. This woman had thrombophlebitis of the left leg which may be the source of emboli. However, although repeated pulmonary embolism may cause bloody effusion, I cannot conceive of it producing so massive an effusion, and I doubt that it would ever cause an effusion severe enough to displace the mediastinum so far to one side.

I have given you my reasons why this is not heart failure. Could it be tuberculosis or even a fungus disease, which could behave like tuberculosis? The course was not that of tuberculosis. This patient died of respiratory insufficiency, it is true, but one does not get the impression of a rapidly disseminating process, causing a toxic febrile state as in miliary spread. Also cultures of the pleural fluid were negative and, most significantly, her tuberculin test was negative. If she had died of tuberculosis she

V 16
1957

would have had to have it several months to years, possibly localized in the knee, and under these circumstances one would anticipate a positive tuberculin test.

This leaves me with a diagnosis of malignancy. Is this a carcinoma that is primary in the lung? I do not think so. So we think of this as metastatic, and I was banking on seeing bunches of infiltrates in the roentgenograms of the right lung, which would back up the possibility of metastatic malignancy. Although the infiltrations are not constant after tapping, I still believe this is a metastatic malignancy, chiefly involving the pleura. Before considering the source, perhaps we should approach this not from the effusion aspect, but from that of respiratory insufficiency. If we do not want to diagnose multiple pulmonary emboli, maybe we should diagnose some other generalized or vascular disease causing respiratory insufficiency, such as lupus erythematosus, periarteritis nodosa, or other collagen diseases. If it had been generalized arteritis, we might consider a rheumatic condition, but the infiltrations disappear with time and a generalized vascular disease, in the preterminal state, should present more systemic involvement than only the lungs and one joint.

Therefore, I again consider this a metastatic malignancy. If that is so, where is the primary source? I do not believe it is bronchogenic. Is it in an ovary or the uterus? We know the adnexa are normal and, from the examination of the corpus, I doubt there is a myosarcoma or endometrial carcinoma. Is it in some other viscus? If so, we have no information to pin it down. Should we look for internal carcinoma because of the thrombophlebitis? Perhaps so, but with localized joint trouble I would not use this as evidence of visceral carcinoma. The patient had a monarticular arthritis with some involvement of the nerve, artery, and vein. Trauma can cause monarticular arthritis, but she had that so far in the past that I do not believe we can relate it to the present illness. Could it be an infectious arthritis, such as tuberculosis? It could be, but for the same reasons that I decided against pulmonary or pleural tuberculosis, I decided against articular tuberculosis. It is conceivable that tuberculosis with granulation tissue will eventually involve the nerve, artery, and vein around a joint, but, if so, I think we should have found extension into the surrounding bone and we would have a description of more than osteoporosis, so I do not believe this is a tuberculous arthritis.

I am left with a tumor of the tissues of the joint or bones. Perhaps the first one to think of is osteogenic sarcoma, but there was no radiologically apparent bone destruction or cysts so I cannot see that this is a bone tumor. One lesion that frequently masquerades as simple swelling, becomes malignant, and metastasizes to the lung, is a synovial sarcoma (malignant synovioma), not so rare a condition as is generally believed. Well over 200 cases have been reported in the literature.[2] It involves the sexes equally. There is predilection for joints of the extremities, particularly the knee. Pain is an outstanding symptom. The average age of onset is 37 years. Its duration may be short or long, up to 30 years being recorded, but the average is about 2 years. One would think that a tumor which is malignant about a joint would produce a palpable mass, but this one does not. Many have masqueraded as simple swelling. The tumors do not have to be large and when found are often not more than 6 cm. in diameter. Sometimes there is a question of a benign tumor having undergone malignant degeneration. The roentgenographic findings are nonspecific and may show only a slight swelling and osteoporosis of the surrounding bone. The tumors have a propensity to metastasize, particularly to the lung and the regional lymph nodes. Other tumors, such as neurofibromas, occur about the joint, but, from the description, if I were to select a primary source for this metastatic malignancy I would choose to look to the knee and would make a diagnosis of synovial sarcoma.

Dr. Paul B. Szanto: The cytological examination of the pleural fluid was omitted from the protocol. Smears revealed adenocarcinoma.

Dr. Waldstein: I do not know of any glandular tissue around the knee joint. From the description here, I do not think the lesion resembles adenocarcinoma. However, perhaps she had simple peroneal nerve palsy and thrombophlebitis on top of it, and perhaps she had an abdominal carcinoma which had metastasized to the lungs. Perhaps we should look to the uterus, which was irregularly enlarged. Maybe there was a degenerative change in this fibroid. She may also have had endometrial carcinoma.

Dr. Louis Feldman: I would suggest the pancreas as a possibility in this malignancy.

Dr. S. Howard Armstrong Jr.: Was a needle biopsy made of the knee joint?

Dr. Szanto: No.

Dr. Armstrong: I would like to stick to the old tried-and-true diagnosis of tuberculosis of the knee joint with pulmonary emboli and thrombophlebitis.

Dr. Samuel Hoffman: Years ago Dr. Kellog Speed reported three cases of sarcoma occurring several years after injury.

Dr. Armstrong: What about the roentgenographic findings in synovial sarcoma?

Dr. Waldstein: They do not show anything more than was described here.

Dr. Frederick Steigmann: Before the cytological findings were given here, I thought this might be a mesothelial sarcoma of the pleura.

Fig. 1.—Nodules varying in size in the pleura and in the parenchyma of the right lung.

Dr. Waldstein: Some of these synovial sarcomas have been considered mesothelial sarcoma until histological examination was made, but I think synovial sarcoma would fit better here.

Clinical Diagnosis.—The clinical diagnosis was synovial sarcoma of the left knee with pulmonary and pleural metastases.

Pathologist's Report

Dr. Szanto: At autopsy, the left pleural cavity contained 1,000 cc. and the right pleural cavity 400 cc. of hemorrhagic fluid. The left lung was collapsed and airless; the right lung was aerated. Grey-white or grey-pink nodules, measuring 0.5 to 2.0 cm. in diameter, were scattered throughout the visceral pleural surface (fig. 1) and in the pulmonary parenchyma, more numerous on the left than on the right. Similar nodules were noted on the pleural and peritoneal surfaces of the diaphragm. The tracheobronchial tree was normal. The bronchopulmonary lymph nodes were small and anthracotic.

The uterus was enlarged by a tumor mass measuring 8 by 6 cm. at the fundus. On section the tumor was of pink-red color. Its texture presented interlacing bundles. Its central portion was soft and its periphery calcified, presenting the typical appearance of a degenerating calcified fibroid.

The left knee appeared swollen. Dissection revealed a circumscribed, nonencapsulated, firm tumor mass measuring 6 by 5 by 4 cm. in the popliteal fossa, attached to the adjacent soft tissue and overlying skin. On cut section, the tumor was grey-white with some hemorrhagic mottling. The tibial and peroneal nerves were embedded in the tumor mass and the knee joint was infiltrated by tumor tissue (fig. 2). The left inguinal lymph nodes were moderately enlarged.

Characteristically, variegated histological patterns could be distinguished in sections taken from various portions of the tumor mass, as follows: 1. Slender, elongated, spindle-shaped cells with tendency to arrangement into bundles (fibrosarcoma-like appearance), with rounding of some of the nuclei (fig. 3). 2. Clefts, and small and large cysts lined by endothelial-like, polygonal, ovoid, or rounded tumor cells. 3. Definite gland-like spaces. Such gland-like structures are lined by high columnar epithelium and may thus lead to a false diagnosis of adenocarcinoma. In our case, the cytological examination of the pleural fluid, obtained by thoracentesis, revealed glandular structures falsely interpreted as adenocarcinoma. 4. Sheets of cells with definite epithelial cohesion presenting the appearance of an anaplastic or even squamous cell carcinoma (fig. 4). The combination

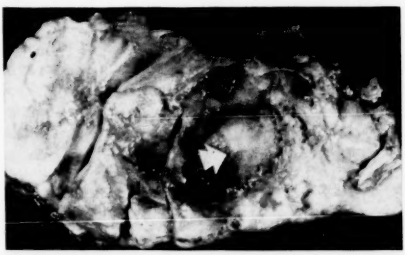


Fig. 2.—Cavity of left knee joint invaded by tumor tissue.

of these various morphologic features is characteristic for synovial sarcoma. The tumor cells produce hyaluronic acid which explains the positive periodic acid-Schiff reaction. The metastatic lesions to the lung, diaphragm, kidneys, and left inguinal lymph nodes consisted of tumor tissue showing the same variegated patterns as the primary tumor. In the

V 16
1957

lymph node, the epithelial pattern and in the lungs, partly sarcomatous, partially the epithelial pattern were found. Small foci of hypostatic bronchopneumonia represent a terminal complication.

Pathological Diagnosis.—The pathological diagnosis was synovial sarcoma of the left knee with metastases to the pleura, lung, diaphragm, kidneys, and left inguinal nodes; terminal bronchopneumonia.

Comment

Dr. Szanto: This 39-year-old woman had long-standing complaints referable to the left knee. Such a history of injury is not infrequent in patients with synovial sarcoma. The frequency of synovial sarcomas in the popliteal space, which is a typical site of traumatic bursitis, would support the hypothesis of an etiological relationship between injury and synovial sarcomas in some cases. Synovial sarcoma, as an extra-articular soft tissue tumor,[2b] only rarely invades the joint. This explains the negative radiological findings of the knee one

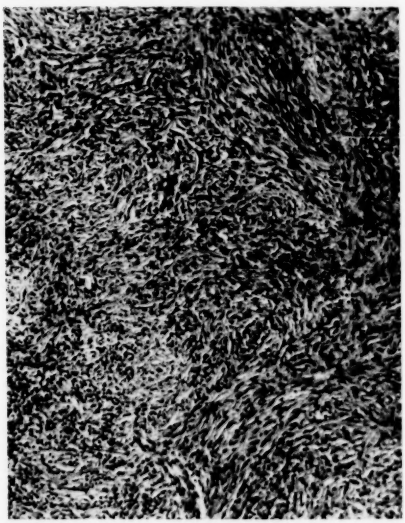


Fig. 3.—Bundles of connective tissue fibers with spindle-shaped nuclei (fibrosarcoma-like appearance); note the slit-like spaces lined by elongated cells (hematoxylin-eosin stain, × 100).

year prior to death, at the time when neurological disturbances due to peripheral nerve involvement were already present. The persistent cough, hemoptysis, and pleural effusion found their explanation in the pulmonary metastatic lesions. The latter also explain the positive cytological findings in the hemorrhagic exudate, falsely interpreted as adenocarcinoma. Synovial sarcoma is a malignant soft tissue tumor, usually occurring adjacent to the knee or ankle and occasionally adjacent to the hip or elbow. It usually occurs in young persons. The tumor is circumscribed, but is attached to the surrounding structures. Histologically, it is

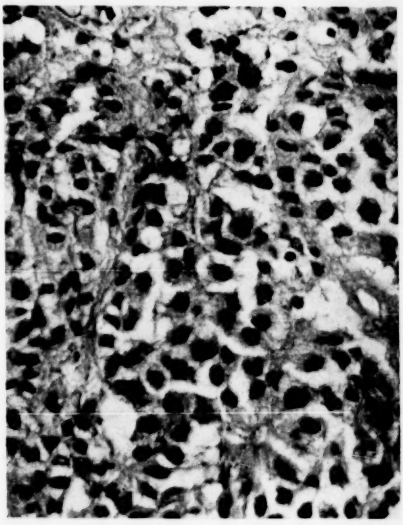


Fig. 4.—Clusters of polygonal, polyhedral cells showing epithelial cohesion (hematoxylin-eosin stain, × 500).

characterized by the variegated features observed in this patient. The tumor is very malignant, metastasizing most commonly to the lung. It may recur even after five years, and, on this basis, the survival rate is less than 5%.

References

1. Leuallen, E. C., and Carr, D. T.: Pleural Effusion: Statistical Study of 436 Patients, New England J. Med. **252:**79-83 (Jan. 20) 1955.

2. (*a*) Pack, G. T., and Ariel, I. M.: Synovial Sarcoma (Malignant Synovioma): Report of 60 Cases, Surgery **28:** 1047-1084 (Dec.) 1950. (*b*) Bennett, G. A.: Malignant Neoplasms Originating in Synovial Tissues (Synoviomata): Study of 32 Specimens Registered at Army Institute of Pathology During Wartime Period 1941-1945, J. Bone & Joint Surg. **29:**259-291 (April) 1947. (*c*) Haagensen, C. D., and Stout, A. P.: Synovial sarcoma, Ann. Surg. **120:**826-842 (Dec.) 1944. (*d*) King, E. S. J.: Tissue Differentiation in Malignant Synovial tumours, J. Bone & Joint Surg. **34-B:**97-115 (Feb.) 1952. (*e*) Maxeiner, S. R., and McLaughlin, B. H.: Synovial Sarcoma: Report of 5 Cases, J. Internat. Coll. Surgeons **17:**65-77 (Jan.) 1952.

THE JOURNAL
OF THE AMERICAN MEDICAL ASSOCIATION
Edited Under the Direction of the Board of Trustees

Editor and Managing Publisher . AUSTIN SMITH, M.D.
Associate Editor . . . . . JOHNSON F. HAMMOND, M.D.
Assistant Editors . . . . . WAYNE G. BRANDSTADT, M.D.
FREDERIC T. JUNG, M.D.
EDWARD R. PINCKNEY, M.D.
Assistant to the Editor . . . . . MILTON GOLIN
Editor for Medical Literature Abstracts . GEORGE HALPERIN, M.D.
News Editor . . . . . CHARLES CHAPMAN

Subscription price . Fifteen dollars per annum in advance
Cable Address . . . . . "Medic, Chicago"

OBSTETRIC ANALGESIA AND ANESTHESIA

THE SAFETY of an anesthetic agent given to a surgical patient depends on the knowledge of the anesthetist and the vigilance with which he watches and cares for his patient. When an anesthetic is being given to an obstetric patient this is only half true, because the anesthetist cannot always determine the effect of the anesthetic on the unborn infant.[1] This is not meant to imply that anesthetic deaths occur only in infants but is meant to stress the fact that a double risk is involved. Although no mother ever died from the pain of childbirth, many die annually from efforts to relieve it.[2] As other causes of maternal death are being brought under control, the relative number of anesthetic deaths has increased so that this cause is now estimated to rank fourth or fifth.[3] Add to this the fact that most analgesics and anesthetics used in obstetrics depress the respiratory center of the infant and it becomes clear that such agents, if used, must be chosen with care and their administration carefully timed and executed.

Unlike the patient prepared for surgery, most women in labor have food in their stomachs. Regurgitation of stomach contents occurs in 14% of even those obstetric patients prepared for an elective operation. If induction of anesthesia is difficult this figure reaches 25%. Aspiration of vomitus is one of the greatest hazards in these patients. This cause, spinal shock, and cardiac arrest account for 69% of the anesthetic deaths incurred by obstetric patients. Dinnick [4] advocates aspiration of the stomach before a general anesthetic is given but warns that even this does not insure an empty stomach if the patient has an esophageal pouch or a diaphragmatic hernia. Furthermore, prolongation of labor after anesthesia has been induced is more apt to be associated with vomiting than the mere presence of food in the stomach. If the anesthetic is given intravenously, too rapid an induction may induce a dangerous hypotension. In a timely article by Apgar and co-workers (page 2155 this issue) the effects of regional and general anesthesia (specifically with cyclopropane) on the infant are compared.

If spinal, caudal, or epidural anesthesia are used it is necessary to keep a close watch on the mother's blood pressure, as shock may occur suddenly. Conduction anesthesia carries the further risk of causing meningitis, epidural abscess, or arachnoiditis. Spinal anesthesia has the advantage that the mother remains awake, the contractivity of the uterus is preserved thereby decreasing blood loss, and respiratory depression of the infant is minimal. The postspinal headache observed in about 8% of those so anesthetized can be largely prevented by adequate hydration of the patient. If this method is used, however, one must be prepared to give the mother artificial respiration with oxygen for several hours in the event that the anesthetic level extends too high. In poor-risk cases, when regional anesthesia is contraindicated, local anesthesia may be used.

In the interest of increasing the safety of obstetric anesthesia Davis makes the following recommendations: 1. Use an anesthetic technique that allows the patient to remain conscious if possible (this includes giving whiffs of ether or nitrous oxide). 2. If unconsciousness must be induced, lower the head and have a suction apparatus immediately available. 3. Give atropine or scopolamine 20 minutes before anesthetization to minimize the patient's secretions. 4. Make sure that the patient is breathing freely at all times. 5. If the patient's condition is in doubt, allow her to breathe air. Dinnick warns that trichloroethylene should not be used if the patient has had meperidine. No method of anesthesia is absolutely safe. The system of relaxed or natural childbirth proposed by Read has been shown to reduce the need for anesthesia or analgesia during labor. If an anesthetic must be used, it is a mistake to allow it to be given by an untrained person except under close supervision. At the very least a trained anesthetist should be available in the event that any complications should arise. As pointed out by Bonica (page 2146 this issue) no rule of thumb can be given with regard to the choice of an anesthetic method or agent in obstetrics. The needs of a given patient must be met by determining which method or agent is best for her. Much has been done to add to the safety of both mother and child at childbirth. By observing sound principles of obstetrics and anesthesia the results can be further improved.

1. Ellison, G.; Philpott, N. W.; and Simpson, G. A.: Obstetrical Anesthesia, Am. J. Obst. & Gynec. **74**: 283-288 (Aug.) 1957.
2. Turner, H. B.: New Factor in Maternal Mortality, J. Kentucky M. A. **55**: 133-136 (Feb.) 1957.
3. Matson, J. E., and Jacoby, J.: Maternal Mortality and Morbidity from Anesthesia, J. Internat. Coll. Surgeons **28**: 172-182 (Aug.) 1957.
4. Dinnick, O. P.: Discussion on Anaesthesia for Obstetrics, Proc. Roy. Soc. Med. **50**: 547 (Aug.) 1957.

V 16
1957

THE PRESIDENT'S PAGE

A MONTHLY MESSAGE

"Dear Dr. Allman: I have read your editorial on the evils of social security for physicians as well as the other information on the subject put out by the Association in an attempt to influence the membership. I want you to know that I and thousands of other loyal, conservative members of the A. M. A. disagree with the stand of the Association in this matter."

This same comment was made in a number of letters received in response to an earlier President's Page on the subject of social security coverage for physicians. Because of my own sincere personal opposition to the inclusion of physicians under the Old Age, Survivors, and Disability Insurance program of the social security system, I answered at length:

"Of course, I know that thousands of other loyal, conservative members of the American Medical Association disagree with the stand of the Association, but you must bear in mind that many more thousands apparently do agree with the stand, for as you recall—as a loyal member of the A. M. A.—your House of Delegates on several occasions has reaffirmed this opposition to compulsory coverage.

"Your note is not clear to me in that you seem to set up the 'Association' or the 'American Medical Association' as something apart from you and expressing opinions and having programs of which you do not approve. Certainly, as a loyal and conservative member of the A. M. A. you attend your county society meetings regularly and have, no doubt, participated in many discussions at its meetings regarding coverage under social security. And you also know that in my editorial the opinions expressed therein are those dictated to us by your delegates in the House of Delegates.

"You further must know that your A. M. A. is probably the most democratic organization in the country. The delegates who are elected confirm all the policies of the Association, and on several occasions opposition to compulsory social security coverage for physicians has been voted upon and passed. Personally, I am a firm believer in the dictum that 'the majority is right or it serves us right.'

"Now as a member of the A. M. A., you know that the present A. M. A. position can be changed. You and the thousands of colleagues who favor sacrificing our principle of freedom and who wish to accept compulsory coverage can elect, from your county society, delegates to your state societies who are of the same opinion or whom you will instruct to support compulsory coverage.

"As soon as the majority of the delegates of the A. M. A. House of Delegates vote in favor of compulsory coverage, I will use my good office to comply with this action. However, if the House of Delegates were to change its policy in favor of compulsory coverage, I would personally feel that we physicians were selling our birthright for a mess of pottage."

I cite my answer merely to show that the A. M. A. is a federation, and as such its policies are established by the elected delegates representing the state associations comprising this federation.

As I said recently in Philadelphia, I, for one, am not willing to accept even a little bit of socialism regardless of others who may be so inclined. I am opposed to the placement of expediency and the dollar sign ahead of principle. I prefer to keep our government headed toward the goal of as much freedom as possible, as little government interference as necessary, rather than take the easy cloverleaf turn leading to more government and the emasculation of individualism.

DAVID B. ALLMAN, M.D., Atlantic City, N. J.

SCENES FROM THE PHILADELPHIA MEETING

1. House of Delegates in session. 2. Board Chairman Hamilton introduces General Practitioner of the Year, Dr. Cecil W. Clark. 3. President Allman warns of Forand bill. 4. News conference on juvenile delinquency. 5. Headquarters staff with mountains of paperwork for delegates. 6. Student A. M. A. officers as House guests. 7. Dr. Clark flanked by award winners of past years. 8. Dr. Hamilton reports on A. M. A. activities. 9. Presession conference of Council on Medical Service.

V 16
1957

10. Twin coil artificial kidney in scientific exhibit. 11. Setting up one of 120 displays in Convention Hall. 12. Showing survey results at technical exposition. 13. Television panel on fees. 14. Navy citation for immediate past-president Murray. 15. Conventioneers accepting service of free phone call to anywhere in the United States. 16. Exhibit on history of medicine in Philadelphia, birthplace of A. M. A. 17. Dial signals for answers at technical exhibit. 18. Relay rack for scientific exhibit on behavioral analysis.

19. Showing artificial limb program in U. S. National Academy of Sciences. 20. Dr. Green hands check for $143,043 from California physicians to Dr. Bauer for AMEF. 21. Explaining behavior of rats in tranquilization exhibit. 22. Doctor and wife inspect one of technical exhibits. 23. Describing tape-recorded medical abstract service. 24. Miniature model of pharmaceutical plant. 25. Scientific exhibit on perinatal mortality pathology. 26. Woman doctor from Arabia listens to exhibitor. 27. Technician runs protein test. 28. Doctor and wife look over products from a drug house.

V 16
1957

ORGANIZATION SECTION

MARCH OF MEDICINE TELEVISION PROGRAM JANUARY 23

"MD International' 'is the title of the hour-long show to be presented at 10 p.m. EST, Jan. 23, over the NBC-TV network both in color and in black and white. This is part of a joint A. M. A. and Smith, Kline & French Laboratories project to inform the public of activities in the health profession for the promotion of better international understanding. The telecast will report doctors' activities in surgery, orthopedics, ophthalmology, and general medicine in Korea, Hong Kong, Burma, Sarawak, Nepal, India, Lebanon, and Ethiopia. A special March of Medicine team traveled more than 34,000 miles to film these doctors in their unofficial roles as America's "medical diplomats." Charles Malik, foreign minister of Lebanon, and Emperor Haile Selassie of Ethiopia will express their peoples' gratitude for the American medical work being carried on in their countries.

AMEF STATE CHAIRMEN TO MEET JANUARY 25-26

The American Medical Education Foundation 1958 fund-raising drive for the nation's medical schools will be officially launched Jan. 25-26 at the seventh annual conference for state chairmen at the Drake Hotel, Chicago. A get-together dinner will be held Saturday evening, Jan. 25. Sunday sessions will be devoted to discussions of ideas for the further development of AMEF campaigns during the year. New work kits will be distributed to state chairmen along with samples of materials used by various state committees. The foundation will pay the expenses of one representative from each state, although any physicians interested in this project are welcome to attend.

JOURNAL INDEX

The index to volume 165 of THE JOURNAL will appear in the Jan. 11, 1958, issue. Those who wish extra copies of the index may receive them, without charge, on request to the Order Department, American Medical Association, 535 N. Dearborn St., Chicago 10.

RURAL HEALTH CONFERENCE MARCH 6-8

The 13th National Conference on Rural Health to be held March 6-8 at the Hotel Heidelberg, Jackson, Miss., is sponsored by the A. M. A. Council on Rural Health, in cooperation with southern state medical associations and farm, educational, and allied organizations. The conference will open with greetings by the governor of Mississippi, the mayor of Jackson, the president of the Mississippi State Medical Association, a member of the A. M. A. Board of Trustees, and the chairman of the Council.

Highlights on Thursday and Friday include a panel on nutrition, a skit depicting a family's visit to the dentist, a visit to the doctor's office with emphasis on the physical examination, a panel on safety, a discussion of what the patient expects from his doctor, a panel on developments in health insurance plans, a report on Mississippi's physician training and placement service, and the annual banquet on Friday evening.

On Saturday morning there will be presentations on (1) health improvement association in rural Illinois; (2) Oklahoma's visiting nurses service; (3) a 4-H Club safety lifting program; (4) 4-H Club work in Nebraska, and (5) Ohio's preceptorship program; also a summary and message by Mrs. Charles W. Sewell of Otterbein, Ind., a member-at-large of the advisory committee to the Council.

REGISTRATION AT THE CLINICAL MEETING, PHILADELPHIA, DEC. 3-6, 1957

UNITED STATES

Alabama	7	Nebraska	11
Alaska	1	Nevada	1
Arizona	2	New Hampshire	3
Arkansas	7	New Jersey	203
California	58	New Mexico	5
Canal Zone	0	New York	174
Colorado	15	North Carolina	30
Connecticut	28	North Dakota	5
Delaware	26	Ohio	67
District of Columbia	47	Oklahoma	9
Florida	22	Oregon	6
Georgia	13	Philadelphia	678
Hawaii	1	Pennsylvania	581
Idaho	6	Puerto Rico	4
Illinois	98	Rhode Island	5
Indiana	34	South Carolina	12
Iowa	14	South Dakota	5
Kansas	12	Tennessee	21
Kentucky	19	Texas	30
Louisiana	7	Utah	7
Maine	7	Vermont	2
Maryland	48	Virginia	37
Massachusetts	42	Washington (State)	9
Michigan	48	West Virginia	20
Minnesota	25	Wisconsin	36
Mississippi	7	Wyoming	4
Missouri	17		
Montana	4	Total	2,580

OTHER COUNTRIES

Africa	1	Persian Gulf	1
Austria	1	Philippines	9
Brazil	1	Portugal	1
Canada	11	Switzerland	1
Chile	2	Syria	1
Colombia	5	Thailand	2
Dominican Republic	2	Turkey	2
England	3	Venezuela	2
Iran	2	Yugoslavia	1
Iraq	1		
Ireland	1	Total (Other Countries)	57
Israel	1		2,580
Japan	1		
Korea	4	Grand Total	2,637
Lithuania	1		

MEDICINE AND THE LAW

USE OF PATERNITY TESTS IN CRIMINAL PROCEEDINGS FOR NONSUPPORT

The Supreme Judicial Court of Massachusetts has recently handed down an interesting decision relating to the use of expert testimony and the results of blood-grouping tests to establish nonpaternity. Such tests have been referred to in the medical literature and used in extralegal situations for more than 20 years. Furthermore, since 1939 some 10 states have enacted laws specifically permitting the admissibility in evidence of the results of such tests, in certain types of cases, when the definite exclusion of the putative father is established thereby. On June 4, 1957, the highest court of Massachusetts had occasion to construe the Massachusetts law, which was passed in 1954.[1]

The defendant in this case had been indicted for a failure to provide for the support of his wife and two minor children. He filed a motion for a blood test under the terms of the 1954 law which provided that "In any proceeding to determine the question of paternity, the court, on motion of the defendant, shall order the mother, her child and the defendant to submit to one or more blood grouping tests, to be made by a duly qualified physician or other duly qualified person, designated by the court, to determine whether or not the defendant can be excluded as being the father of the child. The results of such tests shall be admissible in evidence only in cases where definite exclusion of the defendant as such father has been established. If one of the parties refuses to comply with the order of the court relative to such tests, such fact shall be admissible in evidence in such proceeding unless the court, for good cause, otherwise orders." Apparently the issue presented had not previously been decided so the lower court presented the problem to the Supreme Judicial Court in the form of two specific questions: (1) whether the provisions of the statute are applicable to proceedings brought for nonsupport of minor children; and (2) whether the results of blood tests, which show an exclusion as defined in the statute, is admissible on the question of paternity in criminal proceedings brought for nonsupport of minor children born during wedlock.

In answer to the first question, the court said that the defendant's indictment was not a "proceeding to determine the question of paternity." To support this holding, the court noted that when the legislature was considering the enactment of a paternity test law it was given the choice of the present language, which is also found in the Pennsylvania law, or the language adopted in Ohio, which read, "Whenever it shall be relevant in a civil or criminal action or proceeding to determine the paternity of any person." "It is significant, and persuasive of the correctness of our construction of the Statute," said the court, "that in the statute, as enacted, the language of the Pennsylvania statute was adopted in preference to that of the Ohio code. This Pennsylvania statute has been construed in that Commonweath to be inapplicable in a proceeding similar to that in the present case."

In answer to the second question, however, the court was not quite as technical; it held that apart from statutory authority, expert testimony of blood grouping tests showing the definite exclusion of the defendant as the father of a child, the support of whom is the object of an indictment or complaint, is admissible if otherwise competent. The court said that there is substantial authority to support the scientific reliability of blood grouping tests to prove biologically the impossibility of paternity. There is a presumption of legitimacy in the case of a child born in wedlock which can be overcome only by facts which prove beyond reasonable doubt that the husband could not have been the father. Proof of the impotency of the husband or no access to his wife is held to be sufficient. "Since like certainty of proof appears obtainable through the definite exclusion of the husband's paternity by the tests here under consideration," said the court, "it follows that evidence derived from blood grouping tests would warrant a finding beyond a reasonable doubt that the defendant is not the father of either child named in the indictment and would be admissible."

Without discussing the court's reasoning with respect to its answer to the first question, the important point for our purposes in this case is that the court was convinced of the value and reliability of the blood grouping tests. Hereafter, in Massachusetts at least, results of blood grouping tests to determine paternity may be introduced in a court proceeding in which the question of paternity must be decided, even though the purpose of the proceeding was not specifically to make such a determination. Furthermore, when the tests show definite exclusion the results will apparently be given conclusive effect because the court held that the evidence derived from such tests "would warrant a finding beyond reasonable doubt."

References

[1] *Commonwealth* v. *Stappen, 143 NE (2) 221 (1957).*

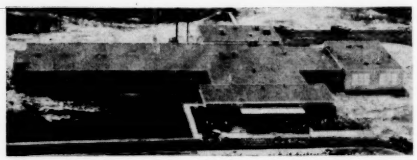
V 16
1957

MEDICAL NEWS

ARKANSAS

Personal.—James S. Dinning, Ph.D., associate professor of biochemistry at the University of Arkansas School of Medicine, has been appointed assistant dean by Dr. F. Douglas Lawrason, dean and provost for medical affairs. Dr. Dinning will be responsible mainly for student activities at the school.

Dedicate Stuttgart Memorial Hospital.—The city of Stuttgart recently dedicated the Stuttgart Memorial Hospital, a building with exterior walls of aluminum, a red granite front, terrazzo floors, and air-conditioning. The hospital has a capacity of 88 beds, with facilities sufficient for expansion to 75 beds. It has three operating rooms, two delivery rooms, three nurseries (one, a premature nursery)



The recently dedicated Stuttgart Memorial Hospital, Stuttgart, Ark.

of 15 bassinets, laboratory and x-ray facilities, and a 25,000-watt emergency generator. The hospital cost $550,000, and is operated by the board of commissioners of Stuttgart. Administrator of the hospital is Mr. Robert W. McCuistion, and the chief of staff is Dr. Sherod A. Drennen.

University News.—The University of Arkansas has established a new information office at the Medical Center to cover activities of the Medical, Graduate, Industrial Extension and Research Centers, and the Graduate Institute of Technology—all located at Little Rock. William W. Hughes, formerly of the Arkansas Gazette and now assistant director of information for the University will be in charge of the new office. Suggested articles for the Medical Center News or any requests for information on Medical Center activities may be mailed to the Information Office, Room 1034. The Office also is publishing a weekly calendar of Medical Center events which will be mailed to physicians on request.

Physicians are invited to send to this department items of news of general interest, for example, those relating to society activities, new hospitals, education, and public health. Programs should be received at least three weeks before the date of meeting.

CALIFORNIA

Personal.—Dr. Malcolm H. Merrill, state director of public health and member of the Official Exchange Mission of the U. S. Public Health Service to the U. S. S. R., reported on the health facilities of the Soviet Union before the faculty of the Saint Louis University School of Medicine Nov. 18. He went to St. Louis to receive a special alumni award from the university in connection with Founders' Day.—Dr. John Dudley Keye, Beverly Hills, has given up his practice of internal medicine to accept appointment as medical director of the State Department of Social Welfare, in which position he will be responsible for the delivery of medical care under California's new public assistance program.

State Smog Survey.—A study of the effects of air pollution on the course of chronic respiratory diseases is being conducted by the State Department of Public Health. A 1956 statewide household sample survey of 500 persons showed that chronic respiratory conditions were suffered because of air pollution. A follow-up call on persons interviewed and their doctors has made it possible to obtain a medical history of respiratory symptoms. Periodic call-backs will be made on subjects under study to collect information on their health and on the incidence of acute episodes, visits to physicians, and days on which activities had to be limited or medication taken. The subjects will be grouped into geographic areas and the course of illness of those living in heavily polluted areas compared with those living in relatively smog-free areas. Interviews will be made three times a year—for several years.

CONNECTICUT

Society News.—The following officers of the Connecticut State Allergy Society were elected for 1958: president, Dr. Joseph Weiner; vice-president, Dr. Maurice M. Hillman; and secretary-treasurer, Dr. Marvin Mogil, all of New Haven.

ILLINOIS

Lecture on Emotional Problems.—The fourth lecture in the eighth annual lecture series on Emotional Problems of Childhood will be held Jan. 8, at 8:00 p. m., at the North Shore Hospital, Win-

netka when "Management of Problems of Social Adjustment and the Misbehaving Child" will be discussed by Dr. Harry M. Segenreich, clinical assistant professor of psychiatry, University of Illinois College of Medicine, Chicago. The Commission on Education of the American Academy of General Practice has approved these lectures for Category II credit. The J. B. Lippincott Company of Philadelphia will publish the entire series as a book. All royalties that accrue have been assigned to the American Psychiatric Association. Physicians and allied professional personnel are invited.

Chicago

University News.—Dr. R. F. Whelan, professor of human physiology and pharmacology, University of Adelaide, Australia, presented "Peripheral Vascular Effects of 5-Hydroxytryptamine in Man and Their Antagonism by Lysergic Acid and Sodium Salicylate" Dec. 19 at The Chicago Medical School, sponsored by The Sigma Xi Club.—A total of $304,087.00 in new and continuing research grants has been received by the Chicago Medical School since the end of June, school officials have announced. Of these grants, $77,712 have been received from the U. S. Public Health Service (National Institutes of Health). The grants include those for studies of heart and lung functions, heart pressure tracings, pollen studies, studies of the mechanism of acute pulmonary edema, and cancer studies.

INDIANA

Emeritus Rank for Six Faculty Members.—Indiana University has conferred emeritus rank on six longtime faculty members of the School of Medicine. Honored for service of more than a third of a century are: Dr. Frank Forry, professor of pathology; Dr. Carl Habich, professor of gynecology; Dr. John W. Hofmann, associate professor of gynecology; Dr. Bernard J. Larkin, professor of ophthalmology; Dr. Cecil L. Rudesill, clinical professor of medicine; and Dr. John R. Thrasher, assistant professor of dermatology and syphilology. Their counsel will still be sought in meeting problems of medical education. During the early days of teaching by Drs. Thrasher, Larkin, Rudesill and Habich the School of Medicine occupied the present building adjacent to the recently completed Long Hospital, in the the closing days of World War I. They were soon joined on the faculty by Drs. Hofmann and Forry, and in the succeeding years watched the rapid development of the University Medical Center. With the exception of Dr. Thrasher, who has retired from practice to his farm northwest of Indianapolis, other new members of the emeritus group are still active. Dr. Forry spends several hours a week in his office in the pathology department, while Drs. Rudesill, Larkin, Habich and Hofmann maintain their private practices.

MINNESOTA

Dr. Hewitt Appointed Visiting Professor.—Dr. Richard M. Hewitt, who has just retired after many years as director of the Section on Publications at the Mayo Clinic, has been appointed Alfred P. Sloan Visiting Professor at the Menninger Foundation in Topeka, Kansas, where his address will be 405 Frazier Street.

Dr. Hewitt is the third appointee under a grant from the Alfred P. Sloan Foundation, the previous appointee having been Seward Hiltner, professor of pastoral theology at the University of Chicago. The purpose of these appointments, according to the Topeka Daily Capital "is to enrich the education of physicians studying in the Menninger School of Psychiatry."

MISSOURI

University News.—Dr. Alexander Stuart Douglas, professor of medicine, department of medicine, Royal Infirmary, Glasgow, Scotland, visited the University of Missouri Medical Center, Columbia, on Oct. 19 and held a clinic on coagulation problems.

Dr. Vitale Receives Italian Award.—A charter member of the St. Louis Academy of General Practice, Dr. Nicholas S. Vitale, was presented with the Legion of Merit award of the Italian Republic, at the second annual charity ball and dinner of the St. Louis Chapter of UNICO Nationale, Oct. 12. The presentation, "in recognition of outstanding services," was made by Dr. Roberto De Cardona, Italian consul. UNICO Nationale is a nationwide service organization composed largely of American citizens of Italian origin whose objectives are to stimulate service to society, to encourage high ethical standards in business and the professions, and to interest each member in the public welfare of his community.

V 16
1957

NEBRASKA

Dr. Richards Goes to Thailand.—Dr. Charles E. Richards, associate professor of internal medicine and director of dispensary clinics, University of Nebraska College of Medicine, Omaha, will soon depart for Chiengmai, Thailand, where he will help set up a medical school and serve as advisor on medical education. The average population-doctor ratio in Thailand is said to be 10,000:1 as compared to 800:1 in the United States.

The Thai government has voted funds with which to set up another medical school. The new school in Chiengmai will be the third medical college in Thailand.

NEW YORK

Personal.—Dr. Arthur H. Knudson, professor emeritus of biochemistry at Albany Medical College, recently left for Bogor, Indonesia, where, for the

next two years, he will be with the University of Kentucky project as professor of biochemistry, aiding the agricultural and veterinary science program at the University of Indonesia.

Treatment Unit for Mentally Ill Children.—A new unit for treatment of mentally ill girls aged 5-16 was opened at Central Islip State Hospital Nov. 1. Like the unit for adolescent boys at the same institution, the new treatment facility is part of the expanding state hospital program of special services for emotionally ill children. The unit will receive patients principally from Nassau and Suffolk counties. Dr. Cyril J. C. Kennedy, assistant director (clinical) will direct the treatment program for the girls unit which is housed in a renovated separate building with its own occupational and recreational therapy units as well as four classrooms. Dr. Herbert N. Kohn, supervising psychiatrist, is in charge of the unit.

University News.—The University of Buffalo School of Medicine Harrington Lecture was presented by Tage Astrup, Ph.D., of the Biological Institute, Carlsberg Foundation, Copenhagen, Denmark, on fibrinolysis, Nov. 27.

New York City

Hospital News.—Dr. Harry D. Bruner, of the U. S. Atomic Energy Commission, Washington, D. C., will discuss "Problems in the Study of Internal Emitters," Feb. 7, in the schedule of lectures of the division of neoplastic diseases, Montefiore Hospital.

PENNSYLVANIA

Centenarians During 1958.—For the eleventh consecutive year, members of The Medical Society of the State of Pennsylvania who reach their one hundredth birthday during the year 1958, will receive a hand-lettered, framed testimonial. The Medical Society has presented 330 such testimonials, 30 of them during 1957. The society is seeking names and dates of birth of those residents of Pennsylvania who will have a hundredth birthday during 1958, and information should be sent to The Medical Society of the State of Pennsylvania, 230 State Street, Harrisburg, Pa.

New Editor of State Medical Journal.—Dr. Carl B. Lechner, of Erie, has been appointed medical editor of *The Pennsylvania Medical Journal*, the official publication of The Medical Society of the State of Pennsylvania, to succeed Dr. Walter F. Donaldson, of Pittsburgh, who died last June. The sixth editor in the 60-year history of the journal, Dr. Lechner is immediate past-president of the Erie County Medical Society, editor of its bulletin, *The Stethescope*, and has been since 1949, editor of the bulletin of the Pennsylvania Radiological Society. He is a member of the American Board of Radiology, Cleveland Radiological Society, Radiological Society of North America, the American Roentgen Ray Society, the Inter-American College of Radiology, and the Pittsburgh Nuclear Medicine Society.

Philadelphia

Society News.—The Philadelphia Allergy Society has elected the following officers: Dr. Horace Pettit, president; Dr. Alexander M. Peters, vice-president; and Dr. Eugene A. Hildreth, secretary-treasurer.

TENNESSEE

Society News.—The Memphis Thoracic Society, an organization of Memphis and Western Tennessee Thoracic Surgeons, and Internists, has elected the following officers for 1958: Felix A. Hughes Jr., president; Otis S. Warr, vice-president; and Glenn E. Horton, secretary-treasurer. Physicians in this area interested are welcome to attend meetings. Information may be obtained from the Secretary, Memphis Thoracic Society, 4915 Mockingbird Lane, Memphis 17, Tenn.

TEXAS

Personal.—Dr. John V. Goode, clinical professor of surgery, University of Texas, Southwestern Branch, Dallas, served as the first visiting professor of surgery, Piedmont Hospital, Atlanta, Ga., during the week of Dec. 3. Formal talks were given on "Twenty Years Experience with Peptic Ulcerations of the Stomach and Duodenum," "Surgery of the Aged," "Carcinoma of the Breasts," "Surgery of the Thyroid," and "Pitfalls in General Surgery."

Symposium on Cancer Research.—The 12th annual Symposium on Fundamental Cancer Research will be held March 6-8 at the University of Texas M. D. Anderson Hospital and Tumor Institute, Houston. About 34 papers are scheduled. The first day will be devoted to papers from the hospital staff. Main themes will be radiation biology and cancer, fundamental radiobiology, and induction of neoplasia by radiation, with Warren K. Sinclair, Ph.D., Titus C. Evans, Ph.D., and Dr. Jacob Furth as chairmen, respectively. The Bertner Foundation lecture and award will be presented at 4 p. m., March 7. For information write the University of Texas M. D. Anderson Hospital and Tumor Institute, Houston 25, Texas.

WEST VIRGINIA

Hospital News.—Captain Robert B. Brown, M.C., U. S. Navy, will be guest lecturer at a two-day surgical conference at the Man Memorial Hospital in Man, Jan. 9-10. His subject will be "Arterial

Grafts and Replacement Procedures." Captain Brown is chief of surgery at the Naval Hospital in Bethesda, Md.

GENERAL

Grant Application Deadline.—The Orthopaedic Research and Education Foundation announces that the next deadline for applications for grants by the Foundation is Jan. 1. Applications received after that date will be deferred until June, 1958. Application blanks may be obtained from: Dr. Harold A. Sofield, Secretary-Treasurer, Orthopaedic Research and Education Foundation, 116 S. Michigan Ave., Chicago 3.

Residencies in Medicine and Surgery Available.—Applications are invited for one year's residency in medicine and surgery, beginning July 1, 1958, at St. Paul's Hospital, Saskatoon, Saskatchewan, Canada. The departments are approved by The Royal College of Physicians and Surgeons of Canada, respectively. St. Paul's Hospital is a teaching hospital of the University of Saskatchewan College of Medicine. Apply to Sister Y. Prevost, Superior/Administrator, St. Paul's Hospital, Saskatoon.

Meeting on Surgery of the Hand.—The 13th annual meeting of the American Society for Surgery of the Hand will be held Jan. 31-Feb. 1 at the Waldorf-Astoria Hotel, New York City. A total of 20 papers are scheduled at both scientific sessions, including the following by Canadian speakers: "The Psychologic Impact of Serious Hand Injury," by Dr. Gordon H. Grant, Victoria, B. C., and "Congenital Abnormalities of the Upper Extremities; Principles of Analysis and Reconstruction in 120 Cases," by Dr. Martin A. Entin, Montreal, Que. Registration fee is $7; interns and residents in training will be admitted free. All members of the medical profession are welcome. For information write Dr. George S. Phalen, Secretary-Treasurer, American Society for Surgery of the Hand, 2020 E. 93rd St., Cleveland 6.

Grant for Continuing Education Program.—A $100,000 grant has been issued to Saint Louis University and the Catholic Hospital Association of the United States and Canada by the W. K. Kellogg Foundation, of Battle Creek, Mich. The five-year grant will be used for projection of the association's department of continuing education through the medium of formal classes for hospital department heads and supervisory personnel. Funds will be administered by the departments of hospital administration of the university and the association. The program of continuing education was inaugurated by the association in September. Classes are scheduled to include all hospital areas, professional and service, and are designed to present new developments and techniques.

Since its inception in 1930, the Kellogg Foundation has assisted programs of health education for professional and lay people in the U. S., Canada, Latin America, and Europe. In 1945, the foundation began to assist universities in the Western Hemisphere to establish graduate programs for preparation of hospital administrators.

Graduate Medical Assembly in New Orleans.—The 25th annual meeting of the New Orleans Graduate Medical Assembly will be held March 3-6 with headquarters at the Roosevelt Hotel, New Orleans. The program includes papers presented by the following guest speakers: Drs. Carleton B. Chapman, Dallas, Texas; Herbert Rattner, Chicago; Charles A. Flood, New York City; Robert A. Davison, Memphis; Lawrence M. Randall, Rochester, Minn.; Bayard T. Horton, Rochester, Minn.; Perrin H. Long, Brooklyn; George N. Raines, Washington, D. C.; Robert H. Barter, Washington, D. C.; Ralph O. Rychener, Memphis; Charles Leslie Mitchell, Detroit; Frank D. Lathrop, Boston; Arthur H. Wells, Duluth, Minn.; James M. Baty, Brookline, Mass.; Harold O. Peterson, St. Paul, Minn.; Jere W. Lord Jr., New York City; Claude E. Welch, Boston; and Ormond S. Culp, Rochester, Minn. Symposiums, clinicopathologic conferences, and medical motion pictures are planned. The assembly is approved for category I credit by the American Academy of General Practice. Registration fee is $20. A postclinical tour to Mexico City, Cuernavaca, Taxco, Acapulco, and Xochimilco is arranged. For information write the New Orleans Graduate Medical Assembly, 1430 Tulane Ave., New Orleans 12, La.

Medical Missionary Positions Available.—The Board of Missions of the Methodist Church has announced a need for doctors in its mission fields in 10 countries overseas in 1958. The board, through its Office of Missionary Personnel (150 Fifth Ave., New York 11, N. Y.), is seeking to recruit 10 women and 10 men. The openings cover a varied range of medical fields, including internal medicine, surgery, general practice, public health, gynecology, pathology, and radiology. The Methodist mission board now has 42 doctors at work in countries of Asia, Africa, North and South America; forty-three others are in various stages of training as missionary candidates. In 1958 doctors are being sought for work in the Belgian Congo, Mozambique, Southern Rhodesia, Angola, India, Pakistan, Korea, the Philippines, Sarawak (Borneo), and Mexico. Requirements are generally the same as for practice in the U. S.—college, medical school, internship, and residency. Other requirements include a first-hand experience of what Christianity is and does, age between 23 and 35, and good physical and mental health. It is the general policy to appoint as missionaries members of the Methodist Church, though

V 16
1957

some exceptions are made. For information write the office of Missionary Personnel, 150 Fifth Ave., New York 11, N. Y.

Award in Obstetrics and Gynecology.—The American Association of Obstetricians and Gynecologists announces the availability of "The Foundation Prize," an award consisting of $500. Eligible contestants include only (a) interns, residents, or graduate students in obstetrics and gynecology, and (b) persons with an M.D. degree, or a scientific degree approved by the Prize Award Committee, who are actively practicing or teaching obstetrics, gynecology, or engaged in research in these fields. No fellow of the association or previous award winner shall be eligible. Manuscripts must be presented under a nom de plume to the president of the foundation together with a sealed envelope bearing the nom de plume and containing a card with the contestant's name and address. Manuscripts must be limited to 5,000 words, must be typewritten and double-spaced with ample margins. The successful thesis shall become the property of the association, but this provision will not interfere with publication of the communication. Three copies of all manuscripts and illustrations must be received by Dr. Jean Paul Pratt, Henry Ford Hospital, Detroit, Mich., president of the foundation, before April 1, 1958. The award will be made at the annual meeting of the association, when the successful contestant must appear in person to present his contribution as part of the program, in conformity with the rules of the association. Expenses incident to the presentation are met by the contestant. For information write Dr. E. Stewart Taylor, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver, Colo.

EXAMINATIONS AND LICENSURE

MEDICAL SPECIALTY BOARDS

AMERICAN BOARD OF DERMATOLOGY: *Written.* Several Cities, June 30. *Oral.* Detroit, Oct. 17-19. Final date for filing all applications is April 1. Sec., Dr. Beatrice Maher Kesten, One Haven Ave., New York 32.

AMERICAN BOARD OF INTERNAL MEDICINE: *Written.* Oct. 20, 1958. *Oral.* New Orleans, Feb. 4-7; Philadelphia, April 23-26; San Francisco, June 18-21; Chicago, Oct. 13-16. Sec.-Treas., Dr. William A. Werrell, One West Main St., Madison 3, Wis.

AMERICAN BOARD OF NEUROLOGICAL SURGERY: Examination given twice annually, in the spring and fall. In order to be eligible a candidate must have his application filed at least six months before the examination time. Sec., Dr. Leonard T. Furlow, Washington University School of Medicine, St. Louis 10.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: Various locations in the United States and Canada. *Part I.* Jan. 2. *Part II.* Chicago, May 7-17. Final date for filing application was September 1. Sec., Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6.

AMERICAN BOARD OF OPHTHALMOLOGY: *Written.* January 1958. Final date for filing application was July 1. Sec., Dr. Merrill J. King, Box 236, Cape Cottage Branch, Portland 9, Maine.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY: *Part I.* April 3-4, Rochester, Minnesota, Denver, Colorado, Washington, D. C. Final date for filing application is Nov. 30. *Part II.* New York City, Jan. 29-31, 1958. Sec., Dr. Sam W. Banks, 116 South Michigan Avenue, Chicago 3.

AMERICAN BOARD OF OTOLARYNGOLOGY: *Oral.* Chicago, Oct. 6-9. Final date for filing application is March. Sec., Dr. Dean M. Lierle, University Hospitals, Iowa City.

AMERICAN BOARD OF PATHOLOGY: San Francisco, June 30-July 2. Final date for filing application is May 1. Sec., Dr. Edward B. Smith, Indiana University Medical Center, 1042-1232 W. Michigan St., Indianapolis 7.

AMERICAN BOARD OF PEDIATRICS: *Oral.* Memphis, March 21-23; Atlantic City, May 3-5; Cincinnati, June 13-15; Chicago, Oct. 24-26 and New York, Dec. 5-7. Sec., Dr. John McK. Mitchell, 6 Cushman Road, Rosemont, Pa.

AMERICAN BOARD OF PHYSICAL MEDICINE AND REHABILITATION: *Oral and Written.* Peoria, Ill., June 20-21. Final date for filing application is Feb. 1. Sec., Dr. Earl C. Elkins, 200 First St., S. W., Rochester, Minn.

AMERICAN BOARD OF PLASTIC SURGERY: *Oral and Written.* Galveston, Texas, May 18-20. Corresponding Secretary, Miss Estelle E. Hillerich, 4647 Pershing Ave., St. Louis 8.

AMERICAN BOARD OF PREVENTIVE MEDICINE: *Aviation Medicine,* Washington, D. C., March 20-22. Final date for filing application is December 30. *Occupational Medicine,* April 18-20. Final date for filing application is Jan. 30. *Public Health* on a Regional Basis, April. Final date for filing application is Jan. 30. Sec., Dr. Tom F. Whayne, 3438 Walnut St., Philadelphia 4.

AMERICAN BOARD OF PROCTOLOGY: *Oral and Written, Parts I and II.* September 1958. Final date for filing application is March 15. Sec., Dr. Stuart T. Ross, 520 Franklin Ave., Garden City, N. Y.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY: *Oral.* San Francisco, March 17-18. Final date for filing application is Dec. 17. Sec., Dr. David A. Boyd, Jr., 102-110 2nd Ave., S. W., Rochester, Minn.

AMERICAN BOARD OF RADIOLOGY: *Special Examination in Nuclear Medicine for Diplomates in Radiology or Therapeutic Radiology,* Chicago, May 17. Deadline for filing application is Feb. 1. *Regular Examination in Radiology,* Chicago, May 19-23. Final date for filing application is Jan. 1. *Regular Examination in Radiology.* Washington, D. C., Dec. 8-12. Final date for filing application is July 1. Sec., Dr. H. Dabney Kerr, Kahler Hotel Bldg., Rochester, Minn.

AMERICAN BOARD OF SURGERY: *Part II.* Cincinnati, Dec. 16-17; New Orleans, Jan. 13-14; Durham, N. Car., Feb. 10-11; Baltimore, March 10-11. Sec., Dr. John B. Flick, 225 So. 15th St., Philadelphia 2.

BOARD OF THORACIC SURGERY: *Written.* Various centers throughout the country, February 1958. Final date for filing application is December 1. Sec., Dr. William M. Tuttle, 1151 Taylor Avenue, Detroit 2, Mich.

AMERICAN BOARD OF UROLOGY: *Written examination.* Various cities throughout the country. *Pathology and Oral Clinical.* February 1958. Location not decided. Exec. Secretary, Mrs. Ruby L. Griggs, 30 Westwood Road, Minneapolis 16.

GOVERNMENT SERVICES

ATOMIC ENERGY COMMISSION

Dr. Dunham Receives Award.—At its second annual awards ceremony in Washington, D. C., Dec. 12, the Atomic Energy Commission gave its Distinguished Service award to Dr. Charles L. Dunham, director of the division of biology and medicine. The citation presented to Dr. Dunham points to his "distinguished service to the Atomic Energy Commission and to the Nation through his leadership in managing the complex health and life-science research activities of the atomic energy program. The results of those activities," the citation continues, "have made possible the rapid expansion of private participation in the atomic energy program; the expansion of knowledge of the effects of radiation on man and his environment; the continued encouragement of talented scientists to seek careers in the field of atomic energy, and the enhancement of the prestige abroad of the role of the United States in the development of peaceful applications of atomic energy."

NAVY

First Nuclear Reactor in a Hospital.—The Navy medical department announces that "the first nuclear reactor ever to be installed in a hospital solely for medical use" was dedicated at the U. S. Naval Hospital, Bethesda, Md., on Nov. 15, 1957.

The Honorable Sterling Cole, Member of Congress and Director General, International Atomic Energy Agency, the guest speaker at the dedication, said that the reactor was the forerunner of hundreds of similar devices that some day would be used in hospitals throughout the world to relieve human suffering. Mr. Dan Kimball, former secretary of the Navy and now president of the Aerojet-General Nucleonics Laboratories, San Ramon, Calif., manufacturers of the reactor, said that to date his company had manufactured nine low-power reactors. This reactor, Mr. Kimball added, was modified on the suggestion of the reactor committee of the medical center to meet the Navy medical department needs and was the first specifically modified for medical use only.

The surgeon general, Rear Adm. Bartholomew Hogan, said this Navy isotope laboratory had been obtaining its radioactive material elsewhere and because of the distance and time involved in transportation, radioactive materials with short half-life had not been utilized. Now short half-life radioactive material will be available for use in clinical research and study. Admiral Hogan continued:

> This reactor will give to the clinical services of the hospital a new method of determination of electrolyte concentration. This method is known as neutron activation analysis, and is the analysis of tissues and body fluids after irradiation in the reactor. This type of testing will supplement and replace many of the present laboratory procedures such as the determination of the concentration of sodium, potassium, chlorides and other elements in the blood. In addition, this method of tissue analysis will open new vistas and opportunities for the study of disease processes, and their effects upon the structure of the human body. These benefits to medical science will be shared with the medical departments of the other military forces and our civilian medical friends.

The Atomic Energy Commission, on Sept. 13, 1957, granted the U. S. Naval Hospital a license to acquire, possess, and operate a nuclear reactor. The license is to expire 20 years from date of issuance.

VETERANS ADMINISTRATION

Hospital News.—Dr. Oreon K. Timm, manager, VA Hospital, Danville, Ill., has been appointed area medical director in the VA area medical office, St. Paul, to succeed Dr. Einar C. Andreassen, who is retiring. The area medical director in the St. Paul office supervises VA medical programs in Illinois, Iowa, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, Wyoming, and the upper peninsula of Michigan. Dr. Timm is a diplomate of the American Board of Psychiatry and Neurology.

PUBLIC HEALTH SERVICE

Research Grants in Four Months.—The National Institutes of Health, in Bethesda, Md., awarded research grants totaling $46,031,816 during the first four months of the current fiscal year. Of the 3,325 grants, 1,085 totaling $15,631,011 were awarded for new projects. The remaining grants represent continuations or supplements. The grants support research in 478 institutions—medical schools, universities, hospitals, and other research centers—in 48 states, the District of Columbia, 2 territories, and 18 foreign countries.

Personal.—Senior surgeon (R) Dominick J. Lacovara, chief, psychiatric service, U. S. Penitentiary, Lewisburg, Pa., has been assigned to the Federal Correctional Institution, Ashland, Ky., as chief medical officer and chief, Psychiatric Program for Federal Juvenile Cases, for patients, aged 17 to 21, in area east of the Mississippi.

V 16
1957

DEATHS

Collins, Harry Otis ✠ Quincy, Ill.; Keokuk (Ia.) Medical College, 1897; for many years county health officer; served as city health officer; member of the American Public Health Association; associated with the Blessing Hospital and St. Mary's Hospital, where he died Oct. 10, aged 84, of cerebral hemorrhage, complicating a fractured hip received in a fall.

Corley, Franklin Love ✠ Atlanta, Ga.; Emory University School of Medicine, Atlanta, 1915; for many years examining physician for the Metropolitan Life Insurance Company; associated with Grady Hospital and Crawford W. Long Memorial Hospital, where he died Oct. 7, aged 77, of leukemia.

Correll, Sidney Robert, Dayton, Ohio; Boston University School of Medicine, 1953; certified by the National Board of Medical Examiners; interned at Wayne County General Hospital and Infirmary in Eloise, Mich.; served a residency at the Veterans Administration Center; medical missionary; died in Kenieba, French Sudan, French West Africa, Oct. 15, aged 31, as the result of a fire from exploding gasoline.

Cunningham, Joseph Alexander, Chicago; Chicago Medical School, 1918; for many years inspector for the board of health; died Nov. 2, aged 76, of cerebral vascular hemorrhage and hypertension.

Cutler, John Calvin ✠ Newport News, Va.; Northwestern University Medical School, Chicago, 1899; died July 6, aged 89, of senility.

D'Angelo, Benedetto Francis, Franklin Square, N. Y.; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1914; member of the Medical Society of the State of New York; served on the staff of the Columbus Hospital in New York City; died Sept. 11, aged 70, of multiple myeloma and plasmacytoma.

Davis, George Monroe, Bixby, Okla.; University of Louisville (Ky.) Medical Department, 1909; an associate member of the American Medical Association; veteran of the Spanish–American War; for many years member of the board of education; died in St. John's Hospital, Tulsa, Oct. 7, aged 78, of chronic myelogenous leukemia.

✠ Indicates Member of the American Medical Association.

Defnet, Harry John, Escanaba, Mich.; Detroit College of Medicine and Surgery, 1916; veteran of World War I; died in St. Francis Hospital Oct. 1, aged 67.

Dewis, John William ✠ Boston; Harvard Medical School, Boston, 1894; fellow of the American College of Physicians; consulting cardiologist, John Hancock Mutual Life Insurance Company; served with the Massachusetts State Guard during World War I; associated with Carney, St. Elizabeth's, and Massachusetts General hospitals; died Oct. 1, aged 91, of cancer.

Dietel, Frederick William ✠ Churchville, N. Y.; Tufts College Medical School, Boston, 1924; member of the American Academy of General Practice; associated with the Rochester (N. Y.) General Hospital, where he died Oct. 12, aged 57, of pneumonia.

Dorr, Henry Bryan ✠ Goldsboro, N. C.; New York Homeopathic Medical College and Hospital, New York City, 1909; formerly medical superintendent of the Dr. E. C. Hazard Hospital in Long Branch, N. J.; veteran of World War I; died in St. Petersburg, Fla., Oct. 6, aged 73, of acute myocardial infarction.

Egan, James Henry ✠ Tacoma, Wash.; Creighton University School of Medicine, Omaha, 1916; veteran of World War I; formerly county health officer, and for many years a physician for the state athletic commission; served as a member of the state board of health; associated with St. Joseph's, Doctors, and Tacoma General hospitals; died Oct. 15, aged 63, of coronary thrombosis.

Ehinger, Wilbur Roland, Ebenezer, N. Y.; University of Buffalo School of Medicine, 1920; member of the Medical Society of the State of New York; for many years town health officer; associated with Our Lady of Victory Hospital and the Mercy Hospital in Buffalo, where he died Oct. 6, aged 58, of pneumonia.

Ehlert, Edwin Henry, Mayville, Wis.; Rush Medical College, Chicago, 1899; died in Minneapolis Sept. 11, aged 80.

England, Albert Charles ✠ Pittsfield, Mass.; Harvard Medical School, Boston, 1903; for 25 years medical examiner for the Berkshire District; associated with the Pittsfield General Hospital; died Oct. 14, aged 79, of coronary thrombosis.

Erwin, Harlan Lamar ✦ Dalton, Ga.; University of Maryland School of Medicine, Baltimore, 1904; chairman of the county health board; associated with Hamilton Memorial Hospital, where he died Oct. 16, aged 81, of coronary thrombosis.

Eskridge, Frank Lewis ✦ Atlanta, Ga.; International Medical Missionary College and Training School for Nurses, Atlanta, 1907; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1908; also a lawyer; formerly on the faculty of Emory University School of Medicine; associated with Crawford W. Long Memorial Hospital; died Oct. 9, aged 71, of heart disease.

Fainer, Emanuel Montague, Los Angeles; Chicago Medical School, 1917; specialist certified by the American Board of Dermatology and Syphilology; an associate member of the American Medical Association; for many years on the staff of the city health department; died Oct. 12, aged 67.

Farmer, Frank Albert ✦ Roanoke, Va.; Medical College of Virginia, Richmond, 1916; member of the American Academy of General Practice; served as vice-president of the Medical Society of Virginia; past-president of the Southwestern Virginia Medical Society; veteran of World War I; associated with Shenandoah and Roanoke Memorial hospitals; died Oct. 9, aged 66, probably of coronary sclerosis.

Floreth, Otto Philip ✦ Dixon, Calif.; St. Louis University School of Medicine, 1913; on the courtesy staff of the Woodland (Calif.) Clinic Hospital, where he died Oct. 10, aged 75, of cancer.

Fox, Gilbert Graham ✦ Coral Gables, Fla.; University of Louisville (Ky.) Medical Department, 1909; member of the Medical Society of the State of Pennsylvania; for many years practiced in Newell, Pa.; served on the staff of the McKeesport (Pa.) Hospital; died Oct. 8, aged 72, of infarction of the myocardium.

Friedrich, Louis M., Hobart, Ind.; Kentucky School of Medicine, Louisville, 1902; member of the Indiana State Medical Association; served as health officer and deputy coroner; for many years on the staff of the Methodist Hospital in Gary; died in the Porter Memorial Hospital, Valparaiso, Oct. 10, aged 83, of cerebral hemorrhage, arteriosclerosis, and bronchopneumonia.

Gackenheimer, Charles Darwin ✦ Jamaica, N. Y.; Columbia University College of Physicians and Surgeons, New York City, 1926; fellow of the American College of Surgeons; veteran of World War II; associated with Queens General and Jamaica hospitals; died Sept. 18, aged 54, of coronary thrombosis.

Gordon, Elisha Smoot ✦ Dallas, Texas; Southwestern University Medical College, Dallas, 1906; also a graduate in pharmacy; associated with the Dallas Medical and Surgical Clinic-Hospital; died Oct. 4, aged 79.

Gowen, Thomas Francis ✦ Commander, U. S. Navy, retired, Costa Mesa, Calif.; Temple University School of Medicine, Philadelphia, 1929; served during World War II; transferred to the regular Navy in 1948 and retired in June 1951; member of the American Academy of Ophthalmology and Otolaryngology; associated with the Orange County General Hospital and St. Joseph's Hospital in Orange; died Oct. 19, aged 52, of coronary disease.

Gummess, Karl Chester ✦ Los Angeles; College of Physicians and Surgeons, Los Angeles, 1916; served as a member of the state board of medical examiners; associated with California Lutheran, Cedar of Lebanon, and Queen of Angels hospitals; died Oct. 17, aged 68, of cardiac failure and myocardial fibrosis.

Hanford, Peter Oliver ✦ Broadmoor, Colo.; Denver College of Medicine, 1898; fellow of the American College of Surgeons; formerly health commissioner of Colorado Springs, where he was chief of staff emeritus at Memorial Hospital and where he died Oct. 4, aged 85, of arteriosclerotic heart disease.

Hasting, William Edward, Mount Vernon, Ind.; Washington University School of Medicine, St. Louis, 1897; died in Encino, Calif., Sept. 13, aged 90, of heart disease.

Hoeven, Edward Benjamin ✦ Ottumwa, Iowa; Western Reserve University School of Medicine, Cleveland, 1920; secretary of the Wapello County Medical Society; served as secretary-treasurer of the Des Moines Valley Medical Society; veteran of World War I; died in the Methodist Hospital, Houston, Texas, Oct. 6, aged 64, of aneurysm of the aortic arch.

Hooker, Rufus Walker, Los Angeles; Memphis (Tenn.) Hospital Medical College, 1904; at one time a medical missionary in Mexico; died Oct. 12, aged 82, of carcinoma of the prostate.

Inge, James Tunstall ✦ Mobile, Ala.; University of the City of New York Medical Department, New York City, 1894; served as a member of the board of health of Mobile County; died Sept. 30, aged 84, of heart disease and subacute nephritis.

V 16
1957

Iwiansky, Nathan ✱ New York City; Albertus–Universität Medizinische Fakultät, Königsberg, Prussia, Germany, 1918; died in the Montefiore Hospital Oct. 9, aged 66, of pulmonary emboli, hypertensive cardiovascular disease, cerebral thrombosis, and benign prostatic hypertrophy.

Kolouch, Frederick George ✱ Schuyler, Neb.; Creighton University School of Medicine, Omaha, 1912; fellow of the American College of Surgeons; veteran of World War I; served on the staff of the Memorial Hospital; director of the Farmers and Merchants Bank; died Oct. 10, aged 70, of cerebral hemorrhage.

Laird, James Alexander ✱ Chicago; Rush Medical College, Chicago, 1930; veteran of World War I; died in the Chicago Wesley Memorial Hospital Oct. 31, aged 70, of mitral stenosis and rheumatic fever.

McBride, James Thomas ✱ Des Moines, Iowa; College of Medicine and Surgery (Physio-Medical) Chicago, 1907; veteran of World War I; formerly associated with Veterans Administration Hospital, where he died Oct. 6, aged 86, of bronchopneumonia, arteriosclerosis, and cerebral hemorrhage.

Marsh, Ina Alexandria, Buffalo; University of Buffalo School of Medicine, 1930; assistant clinical professor of neurology at her alma mater; specialist certified by the American Board of Psychiatry and Neurology; associated with Edward J. Meyer Memorial Hospital and the Buffalo General Hospital, where she died Oct. 20, aged 54, of cancer of the breast.

Martinson, Martin M., Orlando, Fla.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1902; died Oct. 3, aged 85, of cardiovascular accident and arteriosclerosis.

Mason, Stella M. ✱ Mason City, Iowa; the Hahnemann Medical College and Hospital, Chicago, 1893; died Oct. 2, aged 96.

Murphy, Lyman Clements ✱ Wichita, Kan.; St. Louis University School of Medicine, 1921; specialist certified by the American Board of Pathology; member of the College of American Pathologists; consultant, Community Hospital, Beloit; died Oct. 4, aged 75, of coronary disease.

Patten, Elmer Eugene, Oakland, Calif.; University of Southern California College of Medicine, Los Angeles, 1906; also a graduate in pharmacy; first health officer of Van Nuys; died in Peralta Hospital Sept. 14, aged 87, of cerebral vascular accident.

Peters, Augustus W. ✱ St. Louis; Washington University School of Medicine, St. Louis, 1906; for many years on the staff of St. Anthony's Hospital, where he died Oct. 16, aged 76, of ruptured peptic ulcer.

Pharr, Lucius P. ✱ Jacksonville Beach, Fla.; Atlanta Medical College, 1897; formerly practiced in Auburn, Ga.; died in Jacksonville Oct. 14, aged 81, of coronary thrombosis and arteriosclerosis.

Porter, Richard Carney ✱ Lancaster, N. Y.; University of Nebraska College of Medicine, Omaha, 1938; served on the faculty of the University of Buffalo School of Medicine and the University of Louisville (Ky.) School of Medicine; at one time associated with the Louisville (Ky.) General Hospital and the Edward J. Meyer Memorial Hospital in Buffalo; died while on a hunting trip in the Yukon Sept. 19, aged 44, of coronary thrombosis.

Prager, Leo, Los Angeles; St. Louis College of Physicians and Surgeons, 1921; died Oct. 10, aged 66.

Prentiss, Daniel Webster ✱ Washington, D. C.; Columbian University Medical Department, Washington, 1899; fellow of the American College of Surgeons; formerly on the faculty of George Washington University School of Medicine; veteran of World War I; served on the staffs of Central Dispensary and Emergency Hospital and Eastern Dispensary and Casualty Hospital; died in the Garfield Memorial Hospital Oct. 20, aged 83.

Purdy, John W. ✱ Alpena, Mich.; Saginaw Valley Medical College, Saginaw, 1902; on the staff of the Alpena General Hospital, where he died Oct. 4, aged 79, of angina pectoris.

Ratigan, Carl St. Clair ✱ Dearborn, Mich.; Detroit College of Medicine and Surgery, 1919; first chief of staff and member of the surgical staff at Oakwood Hospital; associated with Mount Carmel Mercy and Providence hospitals in Detroit; died Sept. 23, aged 63.

Replogle, Edward Garrie, Los Angeles; Indiana University School of Medicine, Indianapolis, 1908; died in the Veterans Administration Hospital, West Los Angeles, Sept. 14, aged 73, of acute necrotizing pyelonephritis and prostatic hypertrophy.

Resek, Felix ✱ Kew Gardens, N. Y.; Deutsche Universität Medizinische Fakultät, Prague, Czechoslovakia, 1920; died in the Kew Gardens General Hospital Oct. 13, aged 64, of acute myocardial infarction and diabetes mellitus.

FOREIGN LETTERS

BRAZIL

Ovarian Mesenchymomas.—Dr. Carlos A. Salvatore reports that, (*An. brasil ginec.* 43:249, 1957), in a study of 38 granulosa-cell tumors and theca-luteincell tumors, he found that 22 were pure granulosacell tumors, 8 pure thecomas, and 8 combined tumors, of which 4 were predominantly granulosa-cell tumors and 4 predominantly thecomas. Of the 22 pure granulosa-cell tumors, only 3 were composed of a single type of cell. The rest contained a mixture of two or more patterns. Three of the patients with thecomas showed strong proliferation of fibrous tissue, of which one showed a real combination of thecoma and fibroma. In the series, seven patients showed characteristic lutein changes. The author concluded that there is as yet no convincing proof that these tumors originate from differentiated or undifferentiated cytological elements. Examination of the endometria of 14 patients showed that 8 had granulosa-cell tumors. Of these, five had cystic glandular hyperplasia, and three had adenocarcinoma. Endometrial hyperplasia was found in three thecomas and in three combined tumors.

Lung Cancer.—No pulmonary tumor has aroused as much interest as the so-called alveolar carcinoma. The profusion of the synonyms for this tumor (bronchiolar carcinoma, alveolar carcinoma, adenomatosis, diffuse epithelial hyperplasia, diffuse pulmonary carcinoma, multiple primary carcinoma, and gelatinous papilliferous adenocarcinoma) indicates the amount of confusion about its origin. A. Figueiredo and H. Torloni (*Revista paulista de medicina*, vol. 51, 1957) studied four cases and concluded that the so-called alveolar carcinoma is definitely bronchiolar. They do not believe in the existence of an alveolar epithelium. On the other hand, they have often verified the invasion of the alveolar spaces by bronchiolar epithelium. In three of their four patients with bronchiolar carcinoma, they easily identified bronchiolar neoplastic foci. They assert that bronchiolar carcinoma has certain clinical and radiologic aspects which, though not typical, are highly suggestive of this neoplasia and allow a fairly precise presumptive diagnosis. The gross and microscopic findings are almost pathognomonic. With the exception of exploratory thoracotomy, cytological examination of the sputum and the study of the bronchial washing are the most accurate diagnostic procedures, giving a positive diagnosis in 80% of proved cases. The question of the unifocal or multifocal origin is still debated. Most observers believe that bronchiolar carcinoma has a unifocal origin, but the present authors state that the possibility of multiple primary foci cannot be ruled out.

The items in these letters are contributed by regular correspondents in the various foreign countries.

INDIA

Pyrexial Therapy in the Nephrotic Syndrome.—M. N. Bhattacharya (*Journal of the Association of Physicians of India*, vol. 5, October, 1957) stated that occasional patients with the nephrotic syndrome showed relief of edema on recovery from an infection. This led to the use of pyrexial therapy with measles, malaria, and typhoid vaccine. The diuretic effect has been attributed to the rise of temperature but the introduction of a foreign protein into the body may be a factor. The author tried to assess any correlation between the height of temperature, amount of foreign protein introduced, and the degree of diuretic response in nine patients. Eight of these were given typhoid vaccine intravenously in increasing dosage and the other one was given cow's milk intramuscularly; seven had diuresis with corresponding loss of weight. There was no relationship between the height of temperature and the diuretic effect. The introduction of foreign protein was associated with a greater incidence of diuretic effect than the rise in temperature. Two consistent findings were observed during the therapy: lowering of blood cholesterol level and reduction of urinary albumin. The cause of the diuresis is unknown.

NEW ZEALAND

Evaluation of Medical Students.—At a meeting of the Otago Medical School Research Society in August, Dr. W. Ironside presented some results (abstracted, *Proc. Univ. Otago M. School* 35:9, 1957) of the assessment of personality traits of 9 female and 85 male medical students with the Minnesota Multiphasic Personality Inventory (MMPI). Significant differences were found on comparing mean scores for males and females. In their attitude to taking the test, the women were less defensive about the admission of psychological weaknesses than the men. The interest score of the men showed, as might be expected, a strong interest in the opposite sex. Judging by MMPI norms this interest extends to the adoption of feminine values as distinct from the female merely

V 16
1957

as a sexual object. In contrast the women were inhibited in their sexual interests. They were also inhibited in their social relationships whereas the men were satisfactorily engaged in the affairs of the student community. The men were more naive and more likely to develop conversion-like hysterical symptoms under stress than the women. On the other hand, the women were more likely to have bizarre thoughts and irrational swings of mood. Each of seven students had scores of 70 and over in several of the personality inventory scales. Three of these students identified themselves, and further examination confirmed the implication of their test profiles that they had severe psychological difficulties. These preliminary psychometric investigations indicated that the medical course may impose a greater strain on the female student through a need for her to adopt the standards of a predominantly masculine group and to withdraw from the usual social outlets. The view cannot be excluded however, that female students represent a self-selected group because of a constellation of specific personality traits.

Kidney Transplantation.—At the same meeting R. M. Mitchell (abstracted, *Proc. Univ. Otago M. School* **35**:11, 1957) reported the results of transplanting a kidney to the iliac fossa in nine sheep with removal of the opposite kidney. Three failures occurred due to renal vein thrombosis, arterial thrombosis, and ureteral leaking. Three permanent successes were achieved, the animals surviving six months, two years, and two and one-half years in good health until killed for examination. Following an initial period of urinary suppression in the first 10 days, sheep with "iliac" grafts secreted normal volumes of urine of normal specific gravity and urea content. Sodium and potassium excretion were also normal. Indigo carmine excretion occurred in two and one-half to five minutes in good concentrations as observed by cystoscopy. These kidneys maintained the animals in good health with normal nonprotein nitrogen concentration except in the case of one animal whose nonprotein nitrogen level remained elevated and was 65 mg. per 100 ml. at the time it was killed. Serum electrolyte levels remained normal in all animals.

Macroscopically the successful "iliac" kidneys appeared normal but had drifted from the iliac fossa and were suspended by the vascular pedicle among loops of adherent small intestine. Microscopically their structure was normal but the fibrous capsule was greatly increased. There was urine secretion in three other cases, and the transplants were considered technically successful, but the urinary output of the grafted kidneys remained subnormal and all three animals died in uremia. These grafts had been ischemic for 100, 115, and 120 minutes, respectively, whereas in the three successful cases the periods of ischemia were 80, 70, and 68 minutes. Subsequent experiments in eight sheep revealed that 90 minutes of ischemia in the sheep kidney leads to the development of intense focal tubular necrosis with oliguria. Six animals subjected to such periods of ischemia with immediate contralateral nephrectomy died in uremia within 14 days. In the two survivors the ischemic period had been one hour. The sheep kidney is thus much more sensitive to ischemia than that of the dog and resembles that of the rabbit. The period of ischemia was the most important factor in the successful establishment of abdominal kidney grafts.

Kidney Ischemia and Local Cooling.—At the same meeting R. A. Mitchell and M. F. A. Woodruff (abstracted, *Proc. Univ. Otago M. School* **35**:12, 1957) reported on work done on total ischemia of the kidney. The starting point of this study was the finding that total inschemia of the sheep kidney for 90 minutes or more at body temperature is uniformly fatal. In a series of 20 animals the vessels of the left kidney were clamped for 2 hours and the kidney was cooled by means of a plastic bag irrigated with cold saline solution. The kidney was invaginated into the bottom of the bag and kept in position with a rubber band around the renal pedicle. The temperature of the bag was varied with use of a two-way input, with saline solution at room temperature and saline solution cooled in a refrigerator. The intrarenal temperature was recorded at five-minute intervals with use of a thermocouple needle inserted deeply into the renal substance through the hilus. The right kidney was removed at the end of the experiment. The nonprotein nitrogen and serum electrolyte concentrations were estimated after four weeks and the animals killed for examination of the kidney. In three animals intrarenal temperature above 25 C (average in each case 20, 26, and 25 C) proved ineffective, and the animals died in uremia. Of five animals in which the intrarenal temperature was held between 20 and 25 C one died and another, when killed after four weeks, had a nonprotein nitrogen level of 162 mg. per 100 ml. Of eight animals with intrarenal temperature of 10 to 20 C only one animal died. Postoperative urine collections in the survivors of this group showed some increase in urinary volume, but specific gravity and urea concentration remained within normal limits. Indigo carmine excretion, blood nonprotein nitrogen, and serum electrolyte levels were normal.

Macroscopically the kidneys were normal, apart from fat necrosis in the perinephric capsule. The normal histological appearance contrasted with the extensive focal tubular necrosis seen with two hours of ischemia at body temperature. Temperatures below 10 C in four animals gave variable results. Two animals died, the surface cooling

producing solidification of the renal cortex which resulted in peripheral renal infarcts, also shown in one of the survivors. Local cooling of the kidney to between 10 and 20 C thus appears to have no permanent harmful effect, and the tolerance to ischemia is thereby increased.

Postoperative Potassium Versus Aldosterone.—At the same meeting J. G. Llaurado and M. F. A. Woodruff (abstracted, *Proc. Univ. Otago M. School* **35**:19, 1957) reported the results of further investigations on the stimulus to postoperative transient aldosteronism. The aim of this investigation was to determine whether there is a relationship between two metabolic phenomena both seen after operation: the rise in serum potassium level and the increase in aldosterone excretion; and to ascertain whether the rise in serum potassium level might act as a trigger mechanism to bring about increased production of aldosterone. This hypothesis was prompted by (1) aldosterone quasi-independence of pituitary control; (2) the fact that when normal subjects are fed diets rich in potassium an increased aldosterone excretion occurs; and (3) the fact that by drastic alteration of the sodium-potassium ratio of the perfusing fluid, change in the production of aldosterone by the adrenal cortex perfused in vitro can be produced. Seven patients subjected to various operations were catheterized immediately after operation, and all urine was collected after 6, 12, and 24 hours. At the same time blood specimens were obtained. The results can be summarized as follows: Postoperative elevation in aldosterone excretion may occur at any stage in the first 24 hours. There is no correlation between the magnitude of the rise in potassium level and either the extent or the time of aldosterone excretion. It must therefore be concluded that the stimulus to postoperative transient aldosteronism has to be found outside the pituitary-adrenocortical axis and outside the changes in serum electrolytes. The most likely hypothesis would seem to be that aldosterone overproduction after surgical trauma is determined by a circulating tropic hormone elaborated by a diencephalic center in response to intracranial diminution of blood pressure or flow.

Electrolyte Response After Adrenalectomy.—At the same meeting J. G. Llaurado and V. T. Pearse (abstracted, *Proc. Univ. Otago M. School* **35**:21, 1957) stated that the question whether the electrolyte changes following total adrenalectomy are of an analogous nature and magnitude to those observed after any nonadrenal operation has been the subject of controversy. Thus while some workers had found certain differences, others have observed a striking analogy and used this finding as evidence against the leading role played by the adrenal cortex in the metabolic response to operation. The ideal approach in elucidating this question would be to subject patients to a first-stage adrenalectomy without any steroid replacement and later to a second-stage adrenalectomy without any steroid replacement and then to compare the metabolic changes observed in the same patient after each stage. While this procedure cannot be carried out on moral grounds, use has been made of previous experience on adrenalectomized patients, to institute at the time of the second adrenalectomy the minimal maintenance dosage of corticoids by mouth. This dosage is the daily amounts of corticoids necessary to keep the patient free from symptoms and to maintain a normal arterial blood pressure and a urine sodium-potassium ratio and a blood sugar level within the range of homeostasis (usually 0.2 or 0.3 mg. of fludrocortisone and 20 to 40 mg. of cortisone). On the two days immediately following operation, however, this dose was increased, as it was thought that the corticoid requirements of the patient would be greater.

Two women with disseminated cancer of the breast were subjected to a two-stage bilateral adrenalectomy. After preoperative clinical and biochemical assessment it was concluded that these patients had no adrenocortical metastases. For this reason it was considered safe not to administer any corticoid replacement after the first adrenalectomy. Frequent recordings of blood pressure, blood sugar level, and serum and urine electrolyte estimations indicated an uneventful postoperative period and the absence of any sign of adrenocortical insufficiency. Indeed, there was a marked fall of the sodium-potassium ratio as a reflection of aldosterone overactivity. At the time of the second adrenalectomy, the dosage schedule was as indicated above. This second postoperative period was also uneventful. There was, however, an elevation of the sodium-potassium ratio and not a fall. The authors concluded that hyperactivity of the adrenal cortex in the form of aldosterone secretion is the principal factor responsible for the electrolyte changes present after surgical trauma. Previous contradictory results were due to excessive administration of cortisone, too early preoperative administration, or both.

UNITED KINGDOM

Toxic Effects of New Drugs.—Research with radioactive penicillin has pointed the way to chemical synthesis of new antibiotic drugs that would not be poisonous. The value of such a development is emphasized by reports of the dangerous side-effects of many new drugs. According to Dr. O. L. S. Scott (*Practitioner*, Oct., 1957) modern chemotherapy is more complicated and dangerous than ever before, but the new drugs definitely offer more advantages than disadvantages to the patients. Antibiotics are too often prescribed indiscrimin-

V 16
1957

ately. Many physicians seem to have forgotten that nature provides the first, and often the best, line of defense against infection. Unless physicians quickly adopt a more critical attitude, there is a real risk that antibiotics might prove more of a curse than a blessing. While chemical synthesis would probably not be cheap enough to compete with the fermentation process of molds, it is hoped that the new forms will prove effective against micro-organisms now resistant to natural penicillin and against a wider variety of infections. They may also have less tendency to produce allergic reactions. Research workers using radioactive penicillin found that the drug acts by interfering with the formation of the protective wall needed by the bacterial cell. There are two or three biochemical structures in the wall that are unique to bacteria. Since they do not exist in animal tissues, it may be possible to develop chemical analogs to them that will be nontoxic to animals and man. These might be useful as new antibiotic-like drugs that can be synthesized.

Dr. Scott described the tranquilizers as a mixed blessing. Chlorpromazine is widely used in mental hospitals, often with disastrous effects on the nursing staff, as contact with it may produce a severe dermatitis. Nurses, pharmacists, patients, and workers in the pharmaceutical industry are most commonly exposed. Contact dermatitis from penicillin and streptomycin is also common among physicians and nurses and is especially disabling to the community when it occurs in family physicians and district nurses.

Vitamin D in Dried Milk and Cod Liver Oil Reduced.—The vitamin D content of dried milk is being reduced from a minimum of 280 I. U. per dry ounce to an average of 100, and of cod liver oil from 200 I. U. per Gm. to 100, after advice given recently in a report on welfare foods by a joint subcommittee of the central and Scottish standing medical advisory committees. The change was made because experts pointed out that an excessive intake of vitamin D can cause various illnesses in young children. The manufacturers of proprietary dried milks and of infant cereals have also been asked to adopt the levels of fortification recommended for the welfare foods. The report warns mothers against the overdosage of children with proprietary preparations. Deliveries of national dried milk containing the new levels of vitamin D started about the middle of October and of cod liver oil a few weeks later. Local health authorities were asked, through their medical and nursing staff doing maternal and child welfare work, to advise mothers of young children about their vitamin D requirements. The committee recommended no change in the existing provision of vitamin A and D tablets for expectant and nursing mothers.

Poliomyelitis.—Dr. W. R. Russell (*Practitioner*, Oct., 1957) states that the poliomyelitis virus lives harmlessly in the alimentary canal in a substantial proportion of people. In temperate countries they are showing an increasing tendency to break through the various body barriers and to invade the central nervous system, where they have a remarkable affinity for one type of motor neuron. By the time the disease is recognized the virus is already in these neurons, and little can be done to influence the course of the virus-cell struggle. There is strong evidence that physical activity of any kind, intramuscular injections, and operations at this stage greatly reduce the neuron's chances of survival. During the critical phase of the virus-cell struggle the fate of tens of thousands of motor neurons is decided within a period of perhaps a few hours, and, apart from the protective effect of motor inactivity, there is no known way of influencing this struggle.

Injured Boy Charged by Physician.—A physician who charged a boy cyclist about $1 for treating him after a road accident had his remuneration cut by $73. The physician was also ordered to repay the amount charged. The boy's friends had had to pool their pennies to pay his $1 fee. In a written complaint to the Council, the boy said that after the physician had attended to his leg he told him the fee should be about $1.50 but he would charge only a dollar. When the boy said he had not enough money the physician suggested that his friends chip in. This left them with about 14 cents between the three of them. The physician gave no receipt. Replying to the complaint, he said he had asked for the money as a token payment toward the cost of bandages and dressing, that the boys had volunteered the payment, and that he had made a technical error in not giving a receipt. The investigating committee reported that, although the treatment given was correct, the physician's action in treating the boy privately was unreasonable. He had not discussed the possibility of National Health Service coverage with the boy and had breached his terms of service.

Doctor Draft.—At the inaugural session of the Westminster Medical School in October, Dean H. E. Harding drew attention to the plight of many young physicians when involuntary National Service ends in 1960. A medical manpower problem will also arise in the armed forces. It was known from experience in implementing the Medical Act of 1950, that for the first year after qualifying there were enough preregistration posts, but the post-registration posts of quality were also filled, and in fact they provide experience for a number of dominion and colonial physicians at this level. The dean was therefore greatly concerned for the well over 1,000 young physicians who might have to be

resettled in a two-year period. Most of them on release will want to refresh their experience of civilian hospital practice before planning their careers. They represent an enormous potential of medical skill, and the problems of their future employment can only be determined by national policy after careful inquiry.

Social Services.—Sir Eric Harrison, High Commissioner for Australia, said that, while the improved standards of health throughout the world were a great boon to humanity, they also created problems of their own. The proportion of old people in the population is increasing, and this has led to greater political pressure for increased pensions and, if production is not increased, will inevitably lead to rising taxation. This pressure for bigger and better social services is one of the most pressing political problems of the century. When a community expects to receive, from creation to cremation, assistance and protection from the government, that community should be prepared to accept the responsibility of providing the assistance and protection; but it does not. People seem to think that the government has an inexhaustible supply of free money and that, as a government, it can create wealth. They forget that is is not possible to take more out of a pint pot than one puts in. Inevitably in this age of party politics this leads to the welfare state. Governments tend, in line with public opinion, to provide more and more of the things people once provided for themselves. To supply such increased services, high taxation is imposed, and this limits personal savings for the future and brings increased demands. Thus a vicious cycle is created. This is where the bureaucrat takes over. Once the welfare state is established, one may expect government by regulation, and then a complete breakdown of the services that one was so proud of and that rendered so much to the community. If governments are to do more and more, they should act in such a way as to preserve a certain amount of independence of human spirit. The medical profession should be concerned about this problem. Whatever progress has been made, physicians in Australia believe that there can be no proper medical service unless it preserves freedom of choice, the personal relationship, and some obligation of self-help. The Australian health service is an example of what can be achieved by cooperation between the medical profession and the government.

Less Arsenic and Lead in Tobacco.—The arsenic and lead content of tobacco has decreased in recent years, according to J. H. Oliver (*Lancet*, Sept. 21, 1957). The author's favorite pipe tobacco contains 2.5 ppm of arsenic, compared with 32 in 1951. A popular cigarette contains 2 ppm compared with 68 in 1951. In 1951 the figure for a Havana cigar was 170 and in a recent purchase it was 24. The use of lead arsenate sprays causes the contamination. The decrease in arsenic content is encouraging, because the young will smoke tobacco as long as it is available. It is evident tobacco can be produced without excessive arsenic spraying, and it is hoped that public opinion will insist that tobacco as well as foods have a definite limit of arsenic and lead.

Brain Waves of Divers.—Experiments to determine mental and physical reactions of men making deep dives were conducted at the Royal Naval Physiological Laboratory, Alverstoke, and in a 100-ft. diving tank at Portsmouth. The tests aimed to find out whether air, instead of helium, can be used for descents of more than 300 ft. Caisson disease is likely to occur at depths greater than 100 ft. Some divers breathing air under pressure are subject to a mild form of intoxication. There is sometimes a tendency toward laughter and overconfidence, an impairment of judgment, and oral tingling and numbness. Such effects progressively increase with depth. The incidence of caisson disease is directly related to electrical impulses originating in the diver's brain.

Glass and Bennett, in *Royal Naval Diving*, reported that they recorded the brain waves of their subjects. Then with the electrodes still in place each man entered a compression chamber. While the brain waves were electrically recorded on paper, the divers did short sums at one-minute intervals and the air pressure was increased. Each subject on different days went to simulated depths of 50 to 200 ft. with rest intervals after each 25 ft. The main changes found in the brain-wave patterns were concerned with blocking (a slowing down of the mental processes). This loss of concentration occurred rapidly at high pressures but, more important, was also found at relatively low pressures after a long time. In previous experiments 20 divers were exposed to simulated depths of 200 ft. and were given a set of as many arithmetical problems as they could work in two minutes. The E-test, in which all the small "e's" in a typewritten passage were crossed out in two minutes, was also used. The divers' answers were significantly more often wrong at high pressures than on the surface, but the E-test showed no significant change with the increased depth. Another experiment was to keep a subject at a simulated depth of 100 ft. until blocking was abolished. This took 10 to 12 minutes at this depth. The subject then breathed an oxygen-helium mixture for a few minutes and the blocking to mental arithmetic returned. In other experiments divers breathed 20% nitrous oxide. This would not produce unconsciousness but produced results equivalent to those of a 200-ft. dive. Some of the symptoms, particularly oral tingling and numbness, were comparable with those of caisson disease.

V 16
1957

CORRESPONDENCE

PHENYLKETONURIA

To the Editor:—In the Sept. 28, 1957, issue of THE JOURNAL, page 392, we described a routine diaper test for the early detection of phenylketonuria which is being evaluated in well-baby clinics of southern California. In this study the wet diaper of each infant is tested with a drop of 10% ferric chloride at each visit to the clinic during the first year of life. Hearing about our project, Dr. M. D. Armstrong of the University of Utah kindly informed us of a somewhat similar detection program in England. This program is being initiated this year by Dr. L. I. Woolf of the Hospital for Sick Children, Great Ormond Street, London. We have recently corresponded with Dr. Woolf and we believe JOURNAL readers might be interested in hearing about the approach to this problem in another country. An illustrated card describing the test and its purpose is made available through the Great Ormond Street Hospital to all doctors and clinics in England. Each mother is instructed to supply her clinic or private physician with a urine sample from her baby at the time of the first postnatal visit (about one month of age). The testing is done by adding a little 5% ferric chloride solution to the fresh urine in a test tube. A dark green color indicates a positive reaction. Dr. Woolf advocates that all English babies be included in this program.

These two detection efforts in two such widely separated areas of the world have a common goal, the early detection of phenylketonuria so that phenylalanine-restricted diets can be instituted to prevent the onset of mental deficiency. Each program has its merits and its disadvantages, and it is perhaps good that we are approaching the problem along slightly different tracks. Thus we will have an opportunity to compare and evaluate the programs.

It should be made clear that the ferric chloride reaction (test tube or diaper) is at best a very good screening test. All "positive" reactions should be verified by other tests (i. e., phenylhydrazine urine test and phenylalanine blood level determinations) before the diagnosis of phenylketonuria is established. The most frequently observed false-positive reactions with ferric chloride are the blue-purple response with salicylates and the red-brown response with diacetic acid. We had noted a green response occasionally with bile and we are indebted to Dr. Myrton F. Beeler of the New England Deaconess Hospital for informing us of a few other substances rarely found in urine which also may give a green color reaction with ferric chloride, i. e., pyruvic acid, homogentisic acid, and catecholamines. A false-positive green reaction also has been noted after chlorpromazine medication.

To bring the readers up to date on the survey program in southern California, we can now report that, after about three months of operation, one case of phenylketonuria has been discovered by the diaper test in a well-baby clinic. We feel that this already is a justification of the screening method.

WILLARD R. CENTERWALL, M.D.
College of Medical Evangelists
School of Medicine
Los Angeles 33.

MAILING OF FIXED AND DRIED CYTOLOGICAL SMEARS

To the Editor:—The modern trend toward the screening of the population for cancer detection has emphasized the need for a simple method which would allow the mailing of unstained cytological smears to central laboratories, in a state of good cellular preservation. Recently, several methods accomplishing this purpose were described by Nieburgs (*Am. J. Clin. Path.* **27**:546 [May] 1957); Sagi and Mackenzie (*Am. J. Obst. & Gynec.* **73**:437 [Feb.] 1957); Papanicolaou and Bridges (*J.A.M.A.* **164**:1330 [July 20] 1957). In 1953 one of us (Sills: Correspondence, *J.A.M.A.* **151**:230 [Jan. 17] 1953) published a technique that permitted the drying of fixed smears so that they could be transported long distances, or stored for months. This was done by dipping the alcohol-ether fixed smear into melted polyethylene glycol 1540 (Carbowax 1540) for a few minutes, to allow penetration of the water and ether-alcohol soluble wax into the cells. Soon after removal from this bath the wax is cooled and hardened, coating the entire preparation with a thin film of wax. Prior to staining, the wax was washed away with tap water and the slide passed directly into hematoxylin, and then processed according to the original Papanicolaou technique.

This method has now been simplified by adding the wax directly to the fixative. Two teaspoonsful (10 cc.) of the wax, melted at 60 C, are added to 100 cc. of the ether-alcohol mixture (50 cc. of 95% alcohol and 50 cc. of ether). After fixation in this mixture for one-half to one hour, the slides are taken out and placed with the smeared side up for drying. In about one-half to one hour, the ether-alcohol evaporates, leaving behind a thin, tough film of protective wax, which is washed away with tap water just before staining with hematoxylin.

Gynecologic smears so prepared were studied by one of us (M. G.) and were considered satisfactory from a diagnostic standpoint. This method was also tried with good results on gastric balloon specimens, sputums, and bronchial washings. It was observed that nuclear details were sharp and distinct. Cytoplasmic color was somewhat more eosinophilic than with ether-alcohol fixation alone, but this did not affect the diagnostic value of the method. There was the general impression of a clearer background, providing a clearer over-all cytological picture.

There was no significant increase in the cost of preparing smears by adding the wax to the fixative; rather, there was economy due to the reduced amount of alcohol used and by the shorter time of the staining procedure. The stock solution of alcohol-ether-wax can be prepared and stored in closed containers without any detectable evaporation for a long period of time.

B. Sills, M.D.
M. Garret, M.D.
Department of Pathology
State University of New York
Downstate Medical Center
Brooklyn 3, N. Y.

POSTOPERATIVE URINARY TRACT INFECTIONS

To the Editor:—Patients returning from hospitals after various types of surgery often have complaints of frequent and painful urination and exhibit pyuria. It is conservative to estimate that such complaints occur in 20% of cases postoperatively. In almost all such instances there is a history of catheterization prior to, during, or after operation, regardless of the site of the surgical procedure. Also, almost uniformly it is found, on questioning the patient, or on obtaining the history from the surgeon, that no urinary antiseptics were prescribed and that, indeed, no urine examinations were made postoperatively. In many instances the patient will state that complaints referable to the urinary tract were verbalized while in hospital but were ascribed to "bladder irritation" and not investigated.

Although this situation undoubtedly is well known, it seems worthwhile to make it the subject of a brief communication, because such occurrences are so readily preventable. It would seem that such simple and innocuous procedures as the administration of sulfonamides for brief periods after catheterization should be routine in all hospitals as a preventive measure. In any event, urine examination on one or more occasions after catheterization should never be omitted.

Harold J. Harris, M.D.
Westport, Essex County
New York

RADIO AMATEUR CALL BOOK

To the Editor:—May I call attention to a mistake in the article "CQ for M.D.'s . . . RX for a Fascinating Pastime" on page 1308 of the Nov. 9 issue of The Journal. The Radio Amateur Call Book is published quarterly instead of semiannually. I think the article is very good and timely.

Eugene L. D. Blake, M.D.
816 Citizens Bank Bldg.
Paducah, Ky.

VENOUS THROMBOSIS

To the Editor:—In the Oct. 12 issue of The Journal, page 681, Meyer Naide writes of venous thrombosis in the legs after prolonged television viewing. In the body of the article, he recalls the same condition after long automobile drives. To my knowledge, no one had mentioned the situation in long trips in airplanes. The seats are small, leg room is cramped, and there is little place to go as compared to a train. Furthermore, it is almost impossible to elevate the legs, and patients having a history of circulatory difficulty tend to reach their destination, after a 10-or-12-hour ride, with swollen, painful limbs. Many planes do not have supports for the feet, and even when they are present they are inadequate; thus people with short legs suffer prolonged pressure of the seat edge, whereas those with long legs must sit with the legs jackknifed. Perhaps plane seats could be better designed in this respect and a few could be so designed as to provide provision for modified leg elevation. It seems certain, with the tremendous amount of airplane traveling, that this must be a problem to many people with impaired circulation.

Mary Steichen Calderone, M.D.
245 Kings Point Rd.
Great Neck, N. Y.

PHYSICIANS COVERED BY SOCIAL SECURITY

To the Editor:—In connection with the series of articles on social security currently running in The Journal, it may be of interest to know that hundreds of physicians in New York state are now covered by social security, as civil service employees. This is due to the new law under which a majority of such employees, medical and lay, voted to join the plan on a payroll deduction procedure.

James A. Brussel, M.D.
State of New York
Department of Mental Hygiene
New York 7.

V 16
1957

THE LEISURE CORNER

CHORAL SINGING

One of the most spontaneous and pleasurable human activities is singing. Almost everyone can sing, as the abundance of bathtub baritones attests, but there is no reason for it to be a solitary indulgence, as it can be turned into an even more joyous affair through group participation. In schools, churches, and fraternal groups, choral groups exist which offer one meaningful recreation—a healthy blend of the social and esthetic.

Let us consider the group aspect first. The physician, for example, who thinks occasionally of joining such a group but refrains from doing so out of modest regard for his own voice, is making a mistake. Almost all of the members of the choir with the exception of the director are likely to be untrained singers. It is not necessary for the average person to have formal training to enjoy choral singing, nor is it essential for the aspiring chorister to be able to read music. Every choir has a piano to establish the melody, and then too, the stronger voices in the choir generally help the weaker ones. Aside from their amateur standing, group members share in a friendly gregarious spirit and the desire to make the most of an opportunity to get to know others better while working with them. Choral singing offers an invitation to closer individual relationships and also opens up new vistas in the world of music.

For the physician interested in church music, for example, choir singing is an opportunity to become familiar with a copious and fascinating literature employing such forms as the Mass, the Hymn, the Magnificat, and the Passion. The singer discovers the works of different composers and their interpretation of the same form. With the same satisfaction he obtains from reading two great books on the same subject, he may compare—with his own voice—the Masses by Haydn and Mozart in C Major, the St. Matthew's Passion of both Johann Sebastian Bach and Heinrich Schutz, and the Stabat Mater of composers such as Pergolesi, Palestrina, Vivaldi, and Dvorak, whose works span more than three centuries. He can supplement this diet of sacred music with some of the secular choral works of the great Italian madrigal composer, Claudio Monteverdi, England's Henry Purcell, and the American composer of "fugue tunes" during the Revolutionary War, William Billings.

Although the singer takes pleasure in learning such works, the music is also a great joy to the listener. One of the principal satisfactions of being a chorister, then, is the opportunity to perform or entertain. Choral groups are eagerly welcomed at all sorts of fraternal functions. They add spirit and genuine feeling to holiday celebrations. With amazing rapidity, they acquire reputations that make them sought after to perform at many community enterprises—hospitals, schools, and other civic organizations. There is always the thrill of a first performance, a thrill immeasurably increased, especially at the holiday season, when the choir is brightly and uniformly garbed. The men in white can trade their pale attire for rich reds, blues, and greens; the physician's surgical gown will not suffice.

There is, of course, no reason why choral singing cannot be a family affair. Physicians, who find their time seriously limited and who do not have too many free moments to spend with their wives and children, may discover that family participation in choral singing is the perfect answer. Together they can practice their respective parts at home. They may find their choral efforts so successful that they will be encouraged to organize their own family groups. More important, however, is the fact that the physician can combine his recreation and family responsibilities, thereby making double use of his limited time. In addition, such a technique helps make church-going a family activity.

Another way to expand the enjoyment of choral music is made available to those doctors who may possess tape recording and hi-fi equipment. Since an estimated six million people have hi-fi units and an even larger amount have tape recorders, a good proportion of physicians are probably electronic *aficionados*. Tape recorders can be used either separately or as component parts of hi-fi systems to reproduce choral music. The music can then be listened to either for training purposes or for sheer enjoyment. Fortunate is the man who can, at his leisure, play a hi-fi tape with stereophonic sound of some choral work he himself has participated in.

Though there is a Doctors' Orchestral Society in New York City, there probably are no choral groups made up entirely of doctors. However, the doctor can use his prestige in the community to help organize a choir. In small towns, especially, the physician is naturally regarded as a ranking community leader and can lend his name to such efforts without getting involved in time consuming administrative work. If he undertakes such a job, it should be an easy enough matter to find a qualified director through the local churches or music schools. He can receive professional advice without cost from the American Music Conference in Chicago. The E. R. Moore Company, also in Chicago, leading manufacturers of choir gowns, offers a fascinating free booklet on the organization of choral groups.

Music also hath charms to soothe the general practitioner. Many doctors, harassed by tight schedules, find that music has great therapeutic value. When they can make music themselves by singing, they have an emotional as well as a creative outlet. Doctors, who discover the morale-building potential of choral groups may even find it useful to prescribe music for some of their patients who suffer from an inordinate amount of tension and anxiety. For getting to know both people and music better, choral singing is hard to beat.

MEDICAL LITERATURE ABSTRACTS

INTERNAL MEDICINE

Renal Clearance of Lysine in Cystinuria: Pathogenesis and Management of This Abnormality. P. D. Doolan, H. A. Harper, M. E. Hutchin and E. L. Alpen. Am. J. Med. 23:416-425 (Sept.) 1957 [New York].

Studies concerning plasma concentration of lysine and glomerular filtration rate, endogenous clearance and reabsorption of lysine, and plasma concentration and filtered load and excretion of individual amino acids were performed in 3 men and 1 woman in whom the diagnosis of cystinuria was clearly established. The glomerular filtration rate was measured by inulin clearance. The excretion of glycocyamine after the administration of equimolar amounts of arginine and glycine was measured in 3 of the patients with cystinuria and in 6 normal persons.

Cystinuria is an inherited abnormality in which unusually large amounts of cystine, lysine, arginine, and ornithine are excreted in the urine. Simultaneous measurements of the inulin and lysine clearances indicate that in the fasting state a small amount of lysine is reabsorbed from the glomerular filtrate. The renal tubules are unable to reabsorb any additional amount, and, on loading with lysine, their clearance value approaches that of inulin. A suggested explanation for this tubular defect is that in the homozygous form of cystinuria the transport system is present in only trace amounts. When the transport system is of the membrane carrier type, its limited capacity is exceeded even in the fasting state. Any reabsorption which does occur is accomplished by an active mechanism and passive diffusion plays no role of significance. Patients with cystinuria respond normally to the administration of glycine and arginine in that the excretion of glycocyamine is thereby increased. Therapeutic efforts directed to the specific tubular defect appear to hold little promise. The decrease in cystine excretion, which can be accomplished by dietary restriction, should not be neglected. The addition of a methyl donor to a restricted dietary intake offers no additional advantage. Measures directed at rendering the physicochemical environment less conducive to precipitation deserve further study.

Costal Intraosseous Venography in the Diagnosis of Portal Hypertension. R. Schobinger. Gastroenterologia 88:21-31 1957 (In English) [Basel, Switzerland].

The author observed that the introduction of a radio-opaque substance directly into the rib led, under normal conditions, to the visualization of a fairly constant intrathoracic vascular pattern. It appeared logical to anticipate an increased circulation within the azygos system in patients with portal hypertension, because of the portal systemic shunt established by the reversal of flow of venous blood in the left gastric veins and in the vasa brevia. The author describes a technique developed for costal intraosseous venography. The patient is informed about the procedure and told to expect some mild discomfort at the site of bony puncture. Quiet breathing through the open mouth is important, since forceful respiratory movements or periods of apnea (Valsalva exercise) may induce changes in the intrathoracic pressure and thus lead to poor visualization of the azygos system. Precautionary tests should be made against possible idiosyncrasies to the contrast medium or local anesthetic agent. After adequate sedation of the patient, the 10th rib is identified in the left midaxillary line. The overlying soft tissues and the costal periosteum are infiltrated with a small amount of 1% procainamide hydrochloride solution. A 16-or-17-gauge bone marrow or spinal needle is then introduced with a rotary motion into the medullary cavity of the rib. The contrast medium employed is a 50% solution of diatrizoate (Hypaque) sodium. Approximately 8 to 10 cc. of this substance is then injected under moderate pressure over an interval of 5 seconds or less. One film exposed during the injection of the last 2 cc. of contrast material is usually sufficient to capture a representative picture.

In healthy individuals, the injection of contrast substance thus performed renders radio-opaque a simple venous pattern consisting mainly of 1 or 2 intercostal veins, corresponding to the level of injection, and the azygos system. In patients with portal hypertension a much more complicated venous pattern may be demonstrated. Among the collaterals visualized are the intervertebral veins,

V 16
1957

The place of publication of the periodicals appears in brackets preceding each abstract.

Periodicals on file in the Library of the American Medical Association may be borrowed by members of the Association or its student organization and by individuals in continental United States or Canada who subscribe to its scientific periodicals. Requests for periodicals should be addressed "Library, American Medical Association." Periodical files cover 1948 to date only, and no photoduplication services are available. No charge is made to members, but the fee for others is 15 cents in stamps for each item. Only three periodicals may be borrowed at one time, and they must not be kept longer than five days. Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

internal vertebral venous plexi, ascending lumbar veins, and venous channels in the thoracic wall and on the anterior abdominal wall. The method renders radio-opaque portions of the systemic collateral circulation but does not make visible esophageal varices or other parts of the portal circulation. Such measures as the introduction of a Sengstaken-Blakemore tube, esophagoscopy, barium swallow, and splenoportography have both values and limitations in the diagnosis of portal hypertension and its complications. These procedures, however, deal exclusively with the portal component of the disease. However, the method set forth in this study allows evaluation of systemic vascular alterations accompanying portal hypertension. Thus, costal intraosseous venography does not compete with the other procedures. It should be considered as an addition to the present diagnostic armamentarium.

Factors Influencing Duration of Disease and Rate of Cure in Epidemic Hepatitis. D. Jorke and A. Hanusch. Ärztl. Wchnschr. **12**:666-671 (Aug. 2) 1957 (In German) [Berlin].

The decision as to when epidemic hepatitis can be regarded as definitely cured is extremely difficult, because even after apparent clinical cure the hepatic inflammation may progress until there is a chronic hepatitis with development into atrophic liver. Of the various methods that have been used to estimate the course of development in hepatitis, puncture of the liver is most reliable but not suitable for routine use. In a total of 450 patients observed between 1950 and 1956, the authors used electrophoresis, tests ascertaining the instability of the serum, and liver function tests. These studies were carried out at regular intervals during and after the clinical treatment. The patients are divided into 2 groups: the first, comprising 211 patients, was treated during the first 3 years; the second, comprising 225 patients, was treated during the last 4 years. The patients of the first group were treated for an average period of 4.2 weeks, and only 77 (36.5%) returned for follow-up examination; whereas those of the second group were treated for an average of 5.9 weeks, and 166 (73.8%) returned for follow-up examination.

Of the 77 patients in the first group who came for follow-up examinations, 26 (33.7%) were not cured, whereas of the 166 in the second group who reported for these follow-up examinations, only 28 (16.8%) were not cured. This shows that with longer treatment and more certain follow-up studies, the number of patients cured was doubled. Chronic hepatitis developed in two-thirds of the patients. The length of time that elapsed between onset of hepatitis and admission to hospital also influenced the course of the disease. When this period was long (more than 3 weeks) the course of hepatitis was usually prolonged and the prospect of cure diminished. The results of treatment in the clinic were superior to the results of treatment in the home. Classification of the patients according to age showed that increasing age is accompanied by an increase in the average duration of the disease and in the percentage of those who are not cured. In 61 of the 450 patients hyperbilirubinemia persisted for a considerable period after the acute symptoms of hepatitis had subsided. This group with post-hepatitic hyperbilirubinemia included patients with intermittent juvenile hepatitis, with incomplete recovery, and with chronic hepatitis.

The Use of Radioactively Labeled Vitamin B_{12} in the Diagnosis of Pernicious Anemia. C. McC. Smythe. J. South Carolina M. A. **53**:329-332 (Sept.) 1957 [Florence].

The Schilling test for measuring the absorption rate of vitamin B_{12} is useful not in routine cases of pernicious anemia but in cases in which a variety of factors has obscured the usual manifestations of this disease. This accurate and relatively easily performed test allows the rate of absorption and excretion of radioactive cobalt-60 (Co^{60})–labeled vitamin B_{12} to be followed. The original method of following the rate of fecal excretion has been found unsatisfactory for clinical use and as a research tool and has been replaced by a method which measures the total percentage of administered radioactivity excreted in the urine in a 24-hour sample period. In the latter technique the fasting patient is given 0.5μc of Co^{60} in about 0.75 mcg. of vitamin B_{12} by mouth after a control urine sample has been collected and a 24-hour collection started. One hour later, 1,000 mcg. is given subcutaneously. A 5 ml. aliquot of the 24-hour urine collection made up to or reduced to 1 liter by evaporation is counted in a scintillation well counter. A normal excretion rate is anything greater than 12% of the administered dose, and anything less than 3% is indicative of pernicious anemia or some other defect in vitamin B_{12} absorption. The excretion rates varied between 11 and 26% in a group of patients with normal vitamin B_{12} metabolism and excretion rates. One patient with renal disease (whose excretion rate was independent of absorptive efficiency) had an excretion rate of 2% over 24 hours. Three patients with pernicious anemia had excretion rates of 2, 1.25, and 0.25% respectively. This test is not to be thought of as a replacement for the traditional methods of diagnosis of pernicious anemia; in the average untreated case, the history and physical examination, with examination of the blood smear and the bone marrow and demonstration of achlorhydria, a reticulocyte and a hematological response to the parenteral administration of preparations containing vitamin B_{12}, will suffice to make the diagnosis.

Sporotrichosis: A Report of 12 Cases, Including 2 with Skeletal Involvement. W. M. Mikkelsen, R. L. Brandt and E. R. Harrell. Ann. Int. Med. **47**:435-459 (Sept.) 1957 [Lancaster, Pa.].

The authors report on 5 men and 2 women between the ages of 18 and 70 years, and 3 boys and 2 girls between the ages of 2 and 15 years with sporotrichosis, a subacute or chronic infection caused by Sporotrichum schenckii. The infection was limited to the skin and subcutaneous tissues in 10 patients (83%). In each, there was a history of minor trauma, followed within several weeks by the appearance of a primary papular lesion. Typical subcutaneous nodules appeared along the path of lymphatic drainage several weeks or months later. Widespread involvement of the skin and articular tissues occurred in 2 (17%) adult patients. Diagnosis was readily established by the use of routine culture techniques in every patient. The skin lesions responded satisfactorily and promptly to iodide therapy, but articular involvement persisted and progressed. Stilbamidine isethionate and 2-hydroxystilbamidine diisethionate have been shown by other workers to be effective and are considered the treatment of choice in patients with disseminated disease. The pathogenic agent may involve the articulations or bone by direct extension from cutaneous or subcutaneous lesions or by way of the blood stream. The latter route of dissemination is the more common mode of infection. The organism may be seeded into the synovium, with resultant spread to adjacent cartilage and bone, or into the medullary region of bone directly. Lesions are frequently multiple and usually lytic and destructive in their radiologic appearance. Roentgenologically, they are most often confused with those of tuberculosis, although they may resemble metastatic neoplasm, destructive rheumatoid arthritis, or other conditions. Whenever infectious arthritis is suspected, the possibility of sporotrichosis or other fungous infections should be considered and investigated.

Marfan's Syndrome: Description of a Family. R. Wilson. Am. J. Med. **23**:434-444 (Sept.) 1957 [New York].

The author reports on a family with Marfan's syndrome affecting 5 male and 3 female members in 3 generations. Conspicuous abnormalities in this family included dolichocephaly, deformity of the chest, such as funnel and pigeon breast, dilatation of the aorta, hypermobility of joints, and multiple hernias. Thus, defects involving the skeletal and cardiovascular systems that are included in the salient clinical manifestations of Marfan's syndrome were present in these patients, but defects of the eye, which also characterize this syndrome—although they are not an invariable finding, were absent. Talipes cavus occurred in 3 patients. Physical activity, especially excessive sexual intercourse, may have been instrumental in hastening death in 2 men, while an inactive sister tolerated mild aortic dilatation for 16 years. An autopsy performed in 1 of the men revealed aneurysmal dilatation of the root of the aorta with stretching of the aortic ring and aortic regurgitation. This condition had been repeatedly reported in patients with Marfan's syndrome. The disease is a genetically determined, dominantly inherited disorder of protean clinical display, believed to arise from a connective tissue defect.

Pathogenesis of Hepatorenal Syndrome. N. A. Lassen and A. C. Thomsen. Ugesk. læger **119**:1032-1035 (Aug. 8) 1957 (In Danish) [Copenhagen].

In 28 patients with hepatorenal syndrome treated in the dialysis department of Copenhagen Municipal Hospital during the last 2 years, acute renal insufficiency had developed as a complication to an existing hepatic or biliary tract affection. Clinical, laboratory, and pathological investigations showed the renal disorder to resemble renal insufficiency after shock; the renal affection in the hepatorenal syndrome and shock are regarded as identical diseases. Hypotension was established in 19 of the patients and fluid-salt deficiency in 5. No support was found for the theory of a toxin as the cause of the renal injury. Patients with jaundice do not seem always to react with the usual shock symptom of fall of blood pressure, and therefore acutely ill patients with jaundice must be observed closely and their blood pressure measured often. The usual principles of treatment of acute anuria are followed. The prognosis is unfavorable. Of the 28 patients, 20 died. The patients who do recover usually regain a fully sufficient renal function.

Polyposis of Gastrointestinal Tract: The Peutz Syndrome. D. Bailey. Brit. M. J. **2**:433-439 (Aug. 24) 1957 [London].

Two of the 4 cases reported illustrate the association between adenomatosis of the gastrointestinal tract and melanosis of the face, lips, and oral mucosa. No pigmentation was noted in the other 2 patients with this syndrome, although it is quite possible that it was overlooked. The pigmentation is usually present at birth, and fades with increasing age. This was found to be the case with 2 of the patients, who had sought advice earlier regarding the pigmentation which had so faded at the time of examination that it was neglected. Pigmentation of the oral mucosa, according to Jeghers, is the essential part of a syndrome in which the skin may or may not be affected. Pigment spots on the mucosa are blue-black in color. They are most numerous on the mucosal surface of the lower lip

V 16
1957

and cheek, but are also found on the palate, gum, and tongue. Pigment spots on the skin consist of dark-brown and occasionally black spots. They do not coalesce, are most numerous about the mouth, and are present in a butterfly pattern below the eyes and around the bridge of the nose. Differentiation of the pigmented spots from ordinary freckles is accomplished by considering their occurrence in people of dark complexion (freckles are peculiar, as a rule, to fair-skinned individuals), their color (freckles are somewhat lighter), and distribution (freckles are more numerous in the cheek area and relatively sparse in the mouth region).

In the Peutz syndrome, adenomas are found throughout the entire gastrointestinal tract, involvement of the small intestine being reported in all cases. Adenomas in the small intestine may be found in the ileum or the jejunum, though usually in the latter. Symptomatology has been classified by Olson and associates in 1951 as (1) symptoms of obstruction, (2) bleeding, and (3) symptoms produced by local irritability in the intestine. Obstruction may be due to obturation of the intestine, but intussusception is probably the cause of the spasmodic abdominal pain and vomiting. The latter cause, however, is rare in the adult; 78% of such cases occur during the first year of life. The difficulty of clinical diagnosis would be greatly alleviated by recognition of the presence and significance of the typical pigmentation, which often obviates the need for repeated investigation. The only complication of this syndrome, other than those of hemorrhage and intussusception, is that of development of carcinoma. A perusal of the literature reveals an incidence of carcinoma in 24% of patients given a diagnosis of this disease. This figure would probably be raised if all removed polyps were subjected to routine serial section.

Prognosis in Ulcerative Colitis. T. D. Kellock and B. White. Gastroenterologia **88**:13-21 1957 (In English) [Basel, Switzerland].

Ulcerative colitis is a disease with a variable clinical picture ranging from the acute fulminating type, from which the patient dies within a few weeks of the onset to the mild form, with which patients may have chronic continuous diarrhea but may never require hospital admission. The conditions of some patients deteriorate over the years, while those of others improve. It is, therefore, difficult to assess the prognosis of an individual patient. The authors studied the prognoses of 106 patients during their first hospitalization for ulcerative colitis. The mortality rate (18%) in this group was largely due to the incidence of the acute fulminating type of ulcerative colitis, which gives the clinical impression of dysentery. The length of the history preceding admission has little effect on prognosis. Age is, however, of great importance; the mortality rate is 50% in patients over 60. Emergency surgery (ileostomy and colectomy) and the use of cortisone may reduce the mortality rate in future years. The survivors of a first attack may be expected to have a further death rate of 1% or 2% per annum. About one-half of the patients will avoid hospital readmission in the following 5 years. Relapses are less likely to be fatal (6%) than the first attack. The risk of malignant changes, while real, is not great enough to justify surgery in cases in which it is not justified on other grounds.

The C-Reactive Protein Test in Clinical Practice. U. Carcassi and F. Pitus. Minerva med. **48**:2399-2410 (July 14) 1957 (In Italian) [Turin, Italy].

Experience with the C-reactive protein (CRP) test in 453 patients is reported. A total of 1,059 tests was performed. Positive findings were present in 31 patients with acute rheumatic fever; the test showed negative findings after a few days of treatment in 12 patients, within 20 days of treatment in 7 patients, and after 20 days of treatment in 3 patients. Discrepancies were found between the results of the CRP test and the results of other tests; the erythrocyte sedimentation test and the antistreptolysin test still showed positive results when the CRP test had already become negative. The finding of a normal erythrosedimentation rate with a positive CRP test was rare. The test was performed 138 times in 40 patients with rheumatoid arthritis; 32 of these patients had arthritis in the active phase. Some of them were followed for over a year. The results of the CRP test in 2 patients, examined only once, with rheumatoid arthritis in the active phase were 3+ and 1+ respectively. Results of the test in other patients who were examined several times showed that CRP was absent after 5 days of therapy in 7 patients, after 10 days in 8, after 20 days in 10 and was still present after more than 20 days of therapy in 5 patients only. The test was negative in patients with nonactive forms of rheumatoid arthritis. CRP tended to be present for longer periods of time in patients with rheumatoid arthritis than in patients with acute rheumatic fever. The CRP test was negative in 9 patients with arthrosis and in 5 with lumbago.

The CRP test was performed 81 times in 26 patients with myocardial infarction, during the acute phase in 18 patients and during the subacute phase in 8. The test gave positive results 12 hours after the onset of the infarct, and in some patients it remained positive for longer than 20 days. Highest positive results were noticed 4 to 7 days after the onset of the infarct. In some of these patients positive findings of CRP were found long before an increase in the rate of sedimentation was noted; no relationship was found between the leukocyte count and the CRP test. The author believes that recurrence or persistence of CRP in the serum indicates

that the infarct has enlarged or that another infarct or other complications have occurred. The test showed positive findings in 3 of 12 patients with hypertensive cardiopathy and in 7 of 21 patients with congestive decompensation.

CRP was absent in 13 of 14 patients with virus meningitis, in 8 of 9 patients with measles, in 6 of 7 patients with acute hepatitis, in 5 of 7 patients with parotitis, and in 3 of 6 patients with poliomyelitis. The test was positive in 3 patients with Hodgkin's disease, in 2 of 20 patients with benign neoplasia, and in 8 of 14 patients with malignant neoplasia. Metastasis was already present in these last 8 patients. Positive findings in 2 of 15 patients with diabetes could be imputed to the presence of furunculosis in 1 and to intercurrent bronchopneumonia in the other. CRP was absent in 10 patients with exophthalmic goiter, in 22 with pulmonary silicosis, and in 3 with peptic ulcer. Positive findings were noted in 6 of 12 patients with hepatic cirrhosis.

Vascular Haemophilia in a Woman. J. W. Thomas, L. Black and W. H. Perry. Canad. M. A. J. 77:490-492 (Sept. 1) 1957 [Toronto].

The occurrence in women of an antihemophilic globulin (AHG) defect associated with a prolonged bleeding time was first recognized by Larrieu and Soulier; 20 cases of the disease, including 14 in women, were reported in recent literature by Singer and Ramont. The clinical picture in this disorder includes bruising, deep tissue, genitourinary, and gastrointestinal hemorrhages present from infancy; joint hemorrhage is uncommon. The history reported is that of a 24-year-old woman who manifested pathological bleeding since the age of 2 years, at which time she had epistaxis and later ecchymosis and purpura but did not show evidence of gastrointestinal or joint hemorrhage. From the time that her menses began, she had moderate to severe menorrhagia and required 12 transfusions up to 1954. The patient was then hospitalized with antepartum hemorrhage, later giving birth to a stillborn infant and developing a severe postpartum hemorrhage and hematuria. The capillary resistance test and one-stage prothrombin time and fibrinogen level estimations were repeatedly normal. A defect was noted in the aluminum hydroxide absorbed plasma portion, compatible with an AHG defect, when a thromboplastin generation test was performed after two findings of abnormal clotting time but normal bleeding time. The abnormality of coagulation in this patient appears to be identical with that of classical hemophilia (AHG defect) in the male. This diagnosis initially was obscured by the normal clotting time, a finding not uncommon in this disorder. Therefore, a thromboplastin regeneration test should be done on all patients with an unexplained prolonged bleeding time when the clotting time is normal.

SURGERY

Pseudoaneurysm of the Left Ventricle. Diagnosis by Direct Cardioangiography: Report of Two Cases Successfully Repaired. R. C. Smith, H. Goldberg and C. P. Bailey. Surgery 42:496-510 (Sept.) 1957 [St. Louis].

The term pseudoaneurysm refers to a false aneurysmal sac whose walls are formed by pericardium and/or adjacent extracardiac tissue and whose interior communicates with the ventricular lumen through the site of the previous cardiotomy incision. It is believed that this is the first report in the medical literature of a successful correction of a false ventricular aneurysm. The development of cardiac decompensation and the appearance of a previously nonexistent bulge in the cardiac x-ray silhouette in a patient who has had a previous ventricular myotomy suggests the presence of a pseudoaneurysm of the ventricle. The radiologic differential diagnosis must be made from pulmonary tumors, localized pericardial effusion, pericardial cyst, aneurysm of the aorta, and the true left ventricular aneurysm—a differentiation readily made by direct cardioangiography as over conventional angiocardiography. Prolonged observation of these lesions can result only in an increase in their size and the ever-increasing danger of left-ventricular failure and/or rupture of the aneurysm and sudden death. X-rays of greater detail and contrast are obtained by injecting radio-opaque dye directly into the left side of the heart, making possible a highly accurate diagnosis of a variety of lesions, including intra-atrial tumors, ventricular septal defects, aneurysm of the ventricle, and aneurysm of the aorta or sinus of Valsalva.

Two communications between the ventricle and the false ventricular aneurysm were found in the first patient reported and a single communication, 6-8 mm. in diameter, in the second. After the aneurysmal sac had been incised within the confines of a purse string suture, these communications were closed by mattress sutures with the operator's finger tip used to tamponade the blood flow. The procedure varied somewhat in the first patient, in whom 2 defects were found within the single false aneurysmal sac, either of which but not both could be effectively controlled by finger tamponade. In this instance the wall of the aneurysm formed by the pericardium was sutured to the ventricular surface about the more caudad of the defects as a temporary patch, utilizing a technique similar to that in the treatment of atrial septal defects by atrioseptopexy. The aneurysm then was opened widely and each defect repaired individually. Closure methods of these lesions must take into account (1) the friable nature of the myocardium sometimes found in association with extreme ventricular hyper-

V 16
1957

trophy and heart failure and (2) the stresses placed on ventricular incisions in order that this complication does not recur.

Confusion of Tricuspid Incompetence with Mitral Insufficiency: A Pitfall in the Selection of Patients for Mitral Surgery. D. P. Schilder and P. Harvey. Am. Heart J. **54**:352-367 (Sept.) 1957 [St. Louis].

Five patients with severe mitral stenosis associated with tricuspid incompetence are reported. Mitral insufficiency was at first suspected because of a loud systolic murmur in the apical area. This murmur was loudest along the lower left portion of the sternal border and xiphoid region and increased in intensity on deep inspiration. Atrial fibrillation, advanced failure of the right side of the heart, loud functional pulmonic murmurs, and other physical signs of tricuspid incompetence were observed. Cardiomegaly was greater than is usual in mitral stenosis because of more advanced right ventricular hypertrophy. At surgery, severe mitral stenosis without mitral insufficiency was discovered. The operation was followed by uniformly good results in the 5 patients.

Problems in the Surgical Management of Thymic Tumors. L. Soutter, S. Sommers, A. S. Relman and C. P. Emerson. Ann. Surg. **146**:424-438 (Sept.) 1957 [Philadelphia].

The authors report on 13 patients with thymoma in whom a correlation was made between pathology, clinical behavior, and treatment. One of the 13 tumors was classified as trabecular adenoma, 3 reticular perithelial spindle cell adenoma, 1 glandular adenoma, and 1 adenosquamous tumor. Among the carcinomatous neoplasms, 1 each of the following tumors was found: trabecular, reticular perithelial spindle cell, reticular clear cell, glandular, and squamous. A lymphosarcoma and a malignant lymphocytoma were also found. Seven of the 13 tumors were classified as malignant on the basis of an aplasia or local invasion. One of the patients with malignant tumor had 2 intrathoracic implants. Two other patients had microscopic evidence of embolic spread to lymph nodes isolated from the tumor mass. One of these also had suggestive evidence of a blood-borne metastasis in the form of a sharply localized pain occurring in the sacrum which disappeared after radiotherapy and administration of nitrogen mustard.

Clinical thymomas are difficult both to diagnose and to treat. Transthoracic exploration through the sternum or the side of the thorax towards which the tumor projected provided a satisfactory exposure for diagnosis of 5 benign and 4 malignant tumors. The 4 remaining tumors were diagnosed microscopically at autopsy. Evidence of malignancy was suggested by the presence of the superior vena cava syndrome in 4 patients with malignant tumors. It was absent in all of the patients with benign growths and in 3 whose thymic carcinoma was located in the lower mediastinum. Six of the patients with thymic cancer had had pneumonia or lung abscess, 2 with benign growths also showed this. All patients with malignant thymoma and 3 without cancer had chest pain of variable nature.

Only 1 malignant tumor, a reticular sarcoma, was completely resectable, but some pericardium had to be removed with the tumor. This patient is alive and well after 4 years. A complete resection, including pericardium and left lung, was feasible in another patient, but the patient died of cardiac arrest. Enough of the thymic carcinoma was removed in a third patient to relieve compression of the vena cava, but extensive involvement of the hilum of the left lung and great vessels prohibited more complete extirpation. The other 4 patients were proved to have inoperable tumors, 1 at the time of surgery and 3 at autopsy. Three patients with malignant tumors died without operation, 1 of pneumonia caused by compression of both major bronchi, 1 of myasthenia gravis complicated by pneumonia, and 1 of a lung abscess secondary to bronchial obstruction. Surgical resection of the benign tumors posed no unusual problems. Of the 5 patients so treated, 2 are alive and well; three died. None had any evidence of recurrent tumor.

One of the 13 patients with solid thymic neoplasm had myasthemia gravis. This disease developed after resection of a thymoma in another. One patient had Cushing's syndrome, 2 had hypoplastic anemia, and agammaglobulinemia later developed in 1 of these. The effect of thymectomy on myasthenia gravis is unpredictable; it has been harmful on Cushing's syndrome, but it is often helpful in hypoplastic anemia. It is of no known benefit in agammaglobulinemia. The frequent development of malignancy in thymoma is considered an indication for its removal whenever possible. The responsiveness of some thymic tumors to irradiation and to hormone therapy suggests this treatment as an alternative when adequate surgical treatment is impossible.

Carcinoma of the Lung: Factors which Influence Five Year Survival with Special Reference to Blood Vessel Invasion. F. C. Collier, W. S. Blakemore, R. H. Kyle and others. Ann. Surg **146**:417-423 (Sept.) 1957 [Philadelphia].

The authors report on 600 patients with carcinoma of the lung. Of these patients, 256 were considered inoperable because of associated disease or extent of the lesion. The remaining 344 were subjected to exploratory thoracotomy; 118 were deemed to be inoperable and 226 (38% of the original group) were subjected to pulmonary resection. Sixteen of the 226 died in the hospital, an operative mortality of 7%. One hundred of the 226 patients underwent

pulmonary resection 5 or more years ago. The operative mortality in this group was the same as in the over-all series. A 100% follow-up obtained in this group showed that the 5-year survival rate was 25% of those subjected to resection, 26.8% of those surviving resection.

The presence or absence of blood vessel invasion by the tumor, as seen in the surgical specimen on microscopic examination, appeared to have a profound influence on survival; 75% of the patients without blood vessel invasion survived 5 years as compared to 6% of those with blood vessel invasion. In the presence of blood vessel invasion, the 5-year survival rate was not significantly influenced by the presence or absence of lymph node invasion. The 5-year survival rate among patients with neither blood vessel invasion nor lymph node invasion was 83%.

Surgical Treatment of Ruptured Aneurysms of the Sinus of Valsalva. C. W. Lillehei, P. Stanley and R. L. Varco. Ann. Surg. **146**:459-472 (Sept.) 1957 [Philadelphia].

Three patients, 1 11-year-old girl, 1 19-year-old girl, and 1 37-year-old man, with ruptured congenital aneurysms originating in the aortic sinus were operated on. In the 2 girls, the aneurysmal sac originated from the right aortic sinus and presented in the right ventricle. In the man, the aneurysm originated in the posterior (noncoronary) sinus and terminated in the right atrium. A sudden onset of abdominal or chest pain and paroxysmal tachycardia and the presence of a continuous murmur and thrill which had not been present before were associated with the occurrence of the rupture in the 2 adult patients. A prominent systolic murmur and thrill had persisted in the 11-year-old child after a previous operation which was performed at the age of 8 years when a tentative diagnosis of patent ductus arteriosus was made. Cardiac catheterization, fluoroscopy of the heart, and chest roentgenograms confirmed the diagnosis of ruptured aneurysms of the aortic sinus preoperatively in all 3 patients. Total cardiopulmonary bypass with the use of the bubble diffusion oxygenator and pump in connection with retrograde coronary perfusion or potassium citrate asystole permitted reparative procedures under direct vision. It is almost certain that had not these lesions proved correctable the life spans of the 3 patients would have been considerably shortened. They are leading normal lives after the successful surgical intervention. Total cardiopulmonary bypass utilizing an extracorporeal circulation makes it now possible to treat by resection aneurysms located anywhere in the aorta, from its origin at the annulus fibrosus of the aortic valve distally to its termination. Correction of ruptured aneurysm of the aortic sinus may well prove as sound a procedure as the curative operation for a patent ductus arteriosus, and it should be carried out the moment its diagnosis is confirmed.

Traumatic Ventricular Septal Defect: Report of a Case Treated Successfully. D. E. Mahaffey, R. Schramel and O. Creech Jr. J. Louisiana M. Soc. **109**:321-325 (Sept.) 1957 [New Orleans].

The patient, a 21-year-old Negro male, was brought to Charity Hospital approximately 15 minutes after having been stabbed anteriorly in the left upper side of the chest. The patient was anesthetized, and, upon insertion of an endotracheal tube, cardiac arrest occurred. The left side of the chest was immediately opened, and spontaneous rhythm returned after the heart was "massaged" 3 times. The left pleural space was filled with blood, and there was bleeding from a perforating wound of the left upper lobe. Blood was noted to squirt from a laceration 1.5 cm. in length in the pericardium. While the bleeding from the left upper lobe was being controlled with pressure, the pericardium was incised, and a laceration approximately 1 cm. in length in the outflow tract of the right ventricle was observed. The laceration in the heart was closed, and the wounds in the left upper lobe were sutured. At this point, the patient, having received 17 pints of blood, manifested acute pulmonary edema. Edema fluid was aspirated from the endotracheal tube, and the heart was somewhat dilated. The patient was digitalized, positive pressure inflation of the lungs was continued, and approximately 400 cc. of blood was withdrawn from the venous circulation with noticeable improvement. Postoperatively, he had a moderate elevation of temperature and a moderate tachycardia. As early as the second postoperative day, a rather harsh systolic murmur was audible over the precordium, and, subsequently a systolic thrill could be felt in the same region. The possibility of this representing the murmur of an acquired ventricular septal defect was entertained. However, the patient continued to improve and was discharged 4 weeks after admission.

The patient was readmitted to the hospital approximately 2 weeks later for cardiac catheterization, which revealed evidence of a left-to-right shunt at the ventricular level, localized in the outflow tract of the right ventricle just below the pulmonary valve. At operation 1 week later, an extracorporeal circuit was established and the cava were occluded. A defect 1 cm. in diameter, located about 2 cm. proximal to the pulmonary valve, was closed, and the incision into the ventricle was closed. The ventricle was open for 6½ minutes and the perfusion lasted for 16 minutes. The cava catheters were removed and the auricular appendage ligated. The pericardium was loosely approximated and a tube was left in each pleural space for drainage. The patient was discharged from the

V 16
1957

hospital 12 days later. At the time of his discharge, his vital signs had been normal for several days and he was completely asymptomatic. Subsequent cardiac catheterization no longer demonstrated a shunt between the ventricles.

Spontaneous Rupture of the Stomach in the Newborn: A Report of Two Cases. J. B. Moore and L. Chan. Surgery 42:484-486 (Sept.) 1957 [St. Louis].

Spontaneous rupture or perforation of the stomach is rare as a cause of morbidity and mortality in the newborn; only 70 cases have been reported to date, and all but 1 have been discovered at postmortem examination. The cause of this clinical entity has not been definitely proved, although a congenital defect of the gastric musculature is prominent among the causes mentioned in the literature. The defect occurs primarily along the greater curvature of the stomach near the cardia, which is the site of the greatest number of spontaneous gastric perforations in the newborn. More than 50% of the cases have occurred in premature infants, an incidence which is not well understood. The onset of perforation is predominantly within the first week of life, is preceded by normal stools progressing from the meconium type to milk stools, is usually associated with restlessness and emesis, and is followed subsequently by poor feeding on the part of the infant. Melena and hematemesis after the onset are more common when peptic ulceration of the stomach is the etiological cause. Abdominal distension, associated with cyanosis and dyspnea, is probably the most important sign of perforated viscus in the newborn. A normal white blood count and temperature are not unusual. Edema of the anterior abdominal wall and flanks may be found and lead to a mistaken diagnosis of bacterial peritonitis secondary to omphalitis. The most important single aid in diagnosis is x-ray of the abdomen, including upright and lateral decubitus films, since free intraperitoneal air is pathognomonic of a perforated viscus. Prompt surgery is the only treatment for spontaneous gastric perforation in the newborn, since the mortality rate may be correlated with the amount of time elapsing between perforation and surgical intervention.

Intra-abdominal Complications Following Distal Subtotal Gastrectomy for Benign Gastroduodenal Ulcerations. C. W. Pearce, G. L. Jordan and M. E. DeBakey. Surgery 42:447-461 (Sept.) 1957 [St. Louis].

During a 6-year period, 406 gastric resections were performed on 403 patients. Of these, 384 were for duodenal ulcer, 63 for gastric ulcer, and 19 for marginal ulcer. The youngest patient was 22 years of age and the oldest 79; all of the patients but 1 were male. Gastrointestinal continuity was maintained after gastric resection by gastrojejunostomy prior to 1953, after which time gastroduodenostomy was used in approximately 30% of the cases. The Hofmeister modification was utilized in 80% of those patients treated by gastrojejunostomy, and the anastomosis was placed in the antecolic position in 70% of the same patients. The area of ulceration was excised in all of the patients with gastric and marginal ulcers and in 233 of the patients with duodenal ulcers, being left intact or only partially excised in 67. Alternate procedures in lieu of gastrectomy included catheter duodenostomy, 2-stage gastrectomy, and transection proximal to the pylorus with excision of the remaining gastric mucosa. There were 11 deaths in the entire series; all occurred in patients treated for massive hemorrhage and ten in patients with duodenal ulcers. No fatalities occurred in patients treated for perforation, obstruction, or intractability. Intra-abdominal complications were directly responsible for 1 death (peritonitis from a leaking gastroduodenal anastomosis) and contributed indirectly to 2 others (27.3% of the fatalities); 4 other deaths were cardiac in cause. Sixty intra-abdominal complications (14.8%) occurred in 53 patients; these complications included gastrointestinal bleeding, leakage of gastroduodenostomy, leaking duodenal stump, injury to the pancreas and biliary tree, intestinal obstruction, intra-abdominal infection, laceration of the spleen, esophagitis with stricture, a small intestinal fistulation, and granulation about a leaking duodenal stump. No useful data for the comparison of gastric and duodenal ulceration were available in the collected series; however, in the authors' own experience there were no deaths reported following resection for gastric ulcers, and the incidence of intra-abdominal complications was only 3.2%.

Simple Closure for Perforated Peptic Ulcer. J. J. McCaughan and R. F. Bowers. Surgery 42:476-484 (Sept.) 1957 [St. Louis].

In 277 instances of perforated peptic ulcer treated during a 10-year period, 262 patients were treated with simple closure or plication as the emergency operation. There were 9 deaths in the entire group, but only 4 deaths (1.5%) occurred as a result of a simple closure or plication of duodenal ulcer. This was achieved in spite of the fact that many patients were treated hours after perforation and many were elderly or in poor condition otherwise. Two of the 4 deaths were the result of an overwhelming bacterial peritonitis. These were patients with duodenal ulcers plicated 23 and 48 hours postperforation respectively. One other patient with bilateral far-advanced pulmonary tuberculosis died on the 4th postoperative day from massive hemorrhage of the plicated duodenal ulcer. The 4th death was that of a patient who died of a suppurative pericarditis secondary to a subphrenic abscess. Wound infection, pelvic abscess, paralytic ileus, pyloric obstruc-

tion, and empyema are among the 40 complications (15.2%) attributable to the disease or the operation. Atelectasis, plebothrombosis, and pleural effusion are complications that may appear in any type of major surgery. Early morbidity is not particularly alarming when one considers that this procedure is performed in the presence of proved bacterial peritonitis or at least potential infection. The 2 instances of pyloric obstruction and gastrointestinal hemorrhage are considered to be significantly low, reflecting the skill of the operators. Follow-up studies showed that 64 patients (40%) required definitive gastric surgery later, and in 60% the disorder was satisfactorily controlled by medical management; it is further predicted that 10-20% more of these patients will require surgery in the future. The number of subsequent operations is, however, still substantially less than that submitted by others. Of the 64 patients who underwent subsequent operations, there were no deaths, which establishes the safety of the secondary procedure.

The Risk of Gastric Cancer After Medical Treatment for Gastric Ulcer. R. Doll, F. A. Jones, F. Pygott and J. L. Stubbe. Gastroenterologia **88**:1-12 1957 (In English) [Basel, Switzerland].

Some surgeons are of the opinion that gastric ulcers should be treated surgically because of the not uncommon recurrence of symptoms after medical treatment and because of the possibility that the ulcer may be malignant. The question to be answered is whether or not all patients should be subjected to an operation which has a certain amount of mortality and which gives rise, in a small proportion of cases, to postoperative morbidity, when this may delay operations for those in whom an operation is needed. The authors reviewed all patients at 1 hospital over a 2-year period in whom the diagnosis of a benign gastric ulcer was considered for the first time. A diagnosis of a benign ulcer was made in 307 patients. During the same period, the diagnosis of cancer of the stomach was made in 126 other patients; these latter patients were not included in the series, since they were not at any time during the period thought to have a benign ulcer.

The 307 patients diagnosed as having a benign ulcer were divided into 3 groups: (1) 22 patients in whom the diagnosis was established at the outset as the result of an emergency partial gastrectomy for hemorrhage or perforation, (2) 266 patients in whom the diagnosis was established with confidence, and (3) 19 patients in whom it was recognized that the possibility of a malignant lesion had not been completely excluded. In the course of a 3-year follow-up study, the diagnosis was changed to cancer of the stomach in 5 cases: none in the first group, 1 in the second (0.4%), and 4 in the third (21%). It is concluded that a benign gastric ulcer can be distinguished from a malignant ulcer with confidence in the great majority of cases and that the risk of misdiagnosis has not proved great enough to justify recourse to surgery as a routine treatment. The finding of persistent achlorhydria during the 12 hours following a test meal or of a large ulcer at or distal to the angulus, is a useful indication that an apparently benign ulcer may be malignant.

Visceral Manifestations of Occlusive Disease of the Intestinal Blood Vessels. G. H. Pratt. Am. J. Gastroenterol. **28**:280-297 (Sept.) 1957 [New York].

The author reports on 9 male and 9 female patients, between the ages of 7 and 94 years, with mesenteric thrombosis. The type of vascular occlusion causing the mesenteric thrombosis was interpreted to be arterial in 11 patients (61.1%) and venous in 7 (39.9%). The arterial occlusion was thrombotic in 10 patients, and it was caused by an embolus in 1 patient with rheumatic heart disease and auricular fibrillation. The period before operation and after the onset of the arterial occlusion varied from 1 to 7 days and averaged 3. The diagnosis of venous occlusion was made from 1 to 10 days after its onset (the average was 7.4 days). Eight (72.7%) of the 11 patients with arterial occlusion operated on died. From 5 to 25 feet of intestine were resected in the patients. One patient had a resection of all the small intestine from 5 inches below the ligament of Treitz, and he survived 80 days; this patient made a surgical recovery but died of his generalized heart disease complicated by the loss of the small intestine. The patients who were operated on promptly recovered.

Four of the 7 patients with venous occlusion recovered. This surprisingly high figure was accounted for by the fact that the suspicion of the lesion led to an early diagnosis. One of these patients had had a previous thrombosis of the mesenteric vein which directed the attention of the surgeon to this diagnosis immediately. Two other patients had had a history of repeated clotting episodes, and the diagnosis was suspected on admission. These diagnoses and recoveries suggest that, in a patient with vague but continuing signs of intestinal obstruction, exploration should be performed early, especially if abnormal venous clotting has occurred previously. When embolectomy for embolic mesenteric occlusion is used more often, it will reduce the mortality rate. It is indicated in any patient who shows fibrillation and signs of mesenteric occlusion.

Antibiotics and Colon Surgery. I. Cohn. Am. J. Gastroenterol. **28**:298-310 (Sept.) 1957 [New York].

A 1-layer end-to-end anastomosis of the colon with complete devascularization of 1 side of the anastomosis was performed in 3 series of dogs. In the first series, the animals did not receive preoper-

V 16
1957

ative preparation; 8 dogs received antibiotics postoperatively into the lumen of the intestine and penicillin by parenteral route for 168 hours, while the other dogs did not receive postoperative antibiotics. In the second series, fifteen dogs were prepared for 3 days by starvation, laxatives, and enemas to provide mechanical cleansing comparable to that employed in patients for elective colon surgery; five dogs received antibiotics postoperatively into the lumen of the intestine and penicillin parenterally, and 10 dogs did not receive antibiotics postoperatively. In the third series, 21 dogs had mechanical cleansing and were given antibiotic therapy for 3 days before the operation; 10 animals received intraluminal antibiotics postoperatively, and 11 animals received no postoperative antibiotics. Results showed that each method of preoperative preparation played a role in improving the safety of elective colon surgery. It is thought that the function of antibiotics, under the circumstances of the experiments, is to inhibit bacterial growth long enough to permit the wall of the intestine to revascularize and heal. If the bacterial population can be controlled during the first 48-72 hours after the anastomosis, sufficient revascularization can occur to permit the intestine to heal. Since the intestine in human patients should not be devascularized, antibiotics should function to aid healing of anastomosis by inhibiting bacterial growth and the edema and other reactions to the bacterial growth. Thus, there are 2 times when antibiotics play a role in elective surgery of the colon: 1 is in reducing the bacterial population before surgery, the other is in maintaining a lowered bacterial flora after surgery. The experiments indicate that preoperative administration of antibiotics does not inhibit bacterial growth beyond the first day after the cessation of the antibiotic therapy. Therefore, it would seem worthwhile to continue administration of antibiotics in the postoperative period.

Various agents for preoperative preparation of the colon were compared under standard conditions of patient care and bacteriological analysis. According to the results obtained, the antibacterial agents were divided into 3 categories. Chlortetracycline (Aureomycin), oxytetracycline (Terramycin), tetracycline (Achromycin), a proprietary combination of tetracycline and nystatin (Mysteclin), chloramphenicol (Chloromycetin), novobiocin (Cathomycin), chlorquinaldol (Sterosan), phthalylsulfathiazole (Sulfathalidine) and succinylsulfathiazole (Sulfasuxidine) belongs to the first category and are not recommended. Neomycin, chlorquinaldol combined with neomycin, and a proprietary combination of oxytetracycline and neomycin (Enterobiotic) belong to the second category and provided satisfactory reduction of the bacterial flora of the colon for preoperative preparation. Combinations of nystatin and neomycin, phthalylsulfathiazole and neomycin, and tetracycline and neomycin belong to the third category and gave the best results for preoperative preparation of the colon.

Sixty-six patients undergoing colon surgery were prepared routinely for 3 days before the operation as follows: they were placed on a low residue diet, given a cathartic the first day, daily enemas, and 200 mg. of tetracycline and 1 Gm. of neomycin every hour for 4 hours, then every 6 hours for 72 hours. At operation 5 Gm. of a sterile surgical powder containing 250 mg. of tetracycline and 1.25 Gm. of neomycin was placed in the intestine to provide an immediate intraluminal antibiotic level. For 5 days postoperatively, the patients received, through a plastic tube inserted into the colon, 150 mg. of tetracycline and 750 mg. of neomycin 3 times daily. The results in the patients were a smoother postoperative course and a more rapid return of normal gastrointestinal function. There were no side-effects in 51 patients. The remaining 15 patients complained of nausea 13 times, vomiting 6 times, and diarrhea and cramps.

Carcinoma of the Adrenal Cortex Without Endocrine Effects. K. F. Wood, F. Lees and F. D. Rosenthal. Brit. J. Surg. **45**:41-48 (July) 1957 [Bristol, England].

The authors report on 7 men and 1 woman, between the ages of 34 and 72 years, with adrenocortical carcinoma without apparent secretion of hormones. Twenty-seven additional cases of this type of malignant tumor were collected from the literature. Pyrexia was a specific feature in all 8 patients and in 11 of the 27 patients previously reported on. Of the 35 patients, 23 complained of pain in the loin or hypochondrium. A fatigue syndrome consisting of weakness, malaise, sweating, weight loss, and anorexia often occurred long before the tumor was clinically manifested. An abdominal mass was palpable in only 11 (31%) of the 35 patients. The diagnosis of adrenocortical carcinoma without hormone effects must, therefore, always be considered when investigating pyrexia of undetermined origin.

The treatment of these tumors is radical surgical extirpation; this was performed in 4 of the 8 patients. Microscopic examination of the operative or autopsy specimen revealed necrosis and hemorrhage as constant findings. These were also reported by others, who considered them as evidence of rapid growth of the tumor. In 1 of the 8 patients who was alive and clinically free from metastases 9 months after the removal of the tumor, the carcinoma was found to be still encapsulated in the operative specimen after symptoms had been present for many months, suggesting that late diagnosis rather than rapid growth may sometimes be responsible for the frequent presence of local and distant metastases. In another patient who was operated on for a small

tumor in the left upper pulmonary alveolus, this solitary metastasis in the lung was considered to be the primary growth before autopsy revealed a highly anaplastic carcinoma of the adrenal cortex with many areas of necrosis and hemorrhage. A plain roentgenogram of the abdomen and an excretory urogram, which may show downward displacement of the kidney or a compression deformity of the upper calices, proved to be most helpful diagnostic means. Further assistance may be obtained from perirenal air insufflation and aortography.

Primary Lymphoedema: Clinical and Lymphangiographic Studies of a Series of 107 Patients in Which the Lower Limbs Were Affected. J. B. Kinmonth, G. W. Taylor, G. D. Tracy and J. D. Marsh. Brit. J. Surg. **45**:1-10 (July) 1957 [Bristol, England].

The authors report clinical and lymphangiographic findings in 77 female and 30 male patients with lymphedema of the lower extremities. Of the 107 patients, 82 had lymphedema praecox and 12 had congenital lymphedema. The edema appeared before the age of 35 years. A history of swelling of the extremities in members of their families was elicited in 18 patients (17%). In 2 of the 18 patients, the edema was both congenital and familial. The edema appeared after the age of 35 in 13 patients; the term lymphedema tarda is suggested for the disease of these patients to signify its retarded or late development. Associated congenital malformations were observed in 14 patients. The commonest associated anomaly was a malformation of blood vessels, which was present in 7 of the 14 patients. One lower extremity only was affected by edema in 47 patients, both lower extremities only in 44, and at least 1 lower extremity and other areas of the body in 16.

In 17 patients there was a history of a precipitating factor, such as surgical intervention, injuries, pregnancy, and cellulitis, which might have caused only transient edema in a normal person. It suggests that there is some addition factor responsible. Lymphangiographic studies which were performed in 87 patients revealed malformation of lymph-vessels as the additional factor in these patients. Hypoplasia of the lymph-trunks, which were deficient in size, number, or both, was observed in 49 patients. Aplasia of lymph-trunks was found in 12 patients. Varicose, dilated and tortuous lymph-trunks were observed in 21 patients. Dermal backflow of lymph from the deeper trunks into the dermal plexus alone was observed in 5 patients. The result of lymphatic dysfunction is accumulation in the tissue spaces of substances of a molecular size large enough to make their return to the blood stream through the capillary walls difficult. Protein accumulation occurs in the tissue spaces if lymphatic drainage is inefficient, with consequent water retention and edema.

NEUROLOGY & PSYCHIATRY

Thyrotoxic Myopathy with Disturbance of Potassium Metabolism. H. Collings Jr. and W. F. Lienhard Jr. Neurology **7**:667-669 (Sept.) 1957 [Minneapolis].

Muscle weakness is a common symptom and occasionally the most disabling manifestation of hyperthyroidism. That thyrotoxic myopathy may occur with little or no clinical evidence of hyperthyroidism, particularly in older patients, is demonstrated by the 48-year-old man whose history is described. Thyroid evaluation as a routine in patients with muscle disorder of obscure etiology led to the proper diagnosis of a treatable disease, with complete restoration to normal health. The simple laboratory and clinical studies of carbohydrate and potassium metabolism led the authors to initiate potassium chloride therapy with an almost immediate "cure" of the muscle weakness while the long-range treatment of hyperthyroidism was underway.

The exaggeration of weakness by carbohydrate ingestion and the rather marked change in the glucose tolerance curve with the treatment of hyperthyroidism suggest that altered potassium metabolism may be related to altered carbohydrate metabolism. Potassium and glucose tend to move out of and into the blood together; potassium is thought to play a part in the intermediary metabolism of glucose to glycogen; and the deposition of glycogen in the liver as accompanied by the deposition of potassium. Potassium also is liberated with lactic acid from muscle tissue during muscular activity as muscle glycogen is utilized. Perhaps the altered carbohydrate metabolism in hyperthyroidism decreases the potassium available for the resynthesis of phosphocreatine and adenosin-triphosphate and hence results in muscle weakness.

Chlorpromazine and Diethylstilbestrol in Severe Mentally Deficient Patients with Malignant Masturbatory Problems. H. W. Geyer. Delaware M. J. **29**:201-202 (Aug.) 1957 [Farnhurst].

In 2 brothers with an idiot mentality, 35 and 30 years of age respectively, masturbation had been a serious problem for 15 years. Treatment with sedatives and with occupational therapy had proved ineffective on a number of occasions. Both patients had resided in a cottage for the most emotionally disturbed and untidy patients. They were given chlorpromazine hydrochloride intramuscularly in doses of 50 mg. 4 times a day, and diethylstilbestrol in doses of 5 mg. on arising and at bedtime. The brothers improved to such an extent that they could be transferred to a ward for less disturbed patients. Their appetite improved, they slept better, and their tidiness was slightly improved. After improvement

V 165
1957

had been established, they were given a maintenance dose of 25 mg. of chlorpromazine and 5 mg. of diethylstilbestrol daily. At the end of 2 months, 1 of the brothers showed signs of return to the former behavior, and the dosage was temporily increased to 50 mg. of chlorpromazine 3 times a day and 5 mg. of diethylstilbestrol twice a day. Within 2 weeks a return to the maintenance dose was possible. Periodical examinations for side-effects of the medication revealed none. The habits of the brothers have been channeled into recreational activities.

Nervous, Allergic Reaction to the Antitetanic Serum in a Patient with Meningococcic Meningitis. F. Corsini. Clin. pediat. 39:243-250 (April) 1957 (In Italian) [Bologna, Italy].

A 15-month-old infant developed symptoms of meningococcus meningitis 2 days after having been given small doses of antitetanic serum and 1 day after injection of tetanus antitoxin. On the 4th day after appearance of meningitis, symptoms of acute cerebral edema appeared: loss of consciousness, stupor, loss of tendon and cutaneous reflexes, trismus, and spasms of the left side of the body. Spasms receded promptly after administration of 20 mg. of chlorpromazine (Largactil). Signs of cerebral edema subsided the following day. The patient was discharged 15 days after her admission to the hospital. It seems that the edematous condition was the allergic reaction to the serum or to the antitoxin, facilitated by the process of the encephalitic and meningitic inflammation. Another possibility would be that the serum reciprocally increased the effect of bacterial (meningococcic) toxins, which in turn also were able to cause serum sensitivity. Thus the combined serum and toxin effects might have caused the edematous reaction, which would have not occurred with their isolated actions.

PEDIATRICS

Experiences with Chickenpox in Patients with Hematologic Disease Receiving Cortisone. W. W. Nichols. A. M. A. J. Dis. Child. 94:219-223 (Sept.) 1957 [Chicago].

Cortisone and corticotropin have little effect on previously acquired immunological resistance. In varicella and other infections lacking specific therapy, occurring in a patient who is already on steroid therapy, the immunity has not been acquired and is probably modified in association with inhibition of inflammation. This may predispose the patient to generalized spread and a fulminant course of the disease. Cortisone appears to be responsible for the increased severity of the virus exanthemata. Three cases of varicella in patients with hematological disorders, of whom 2 had basic leukemia and 1 aplastic anemia, are presented. Two died during the acute illness; they were taking more than 50 mg. of cortisone per day when they contracted varicella. The immediate cause of death appeared to be varicella. The patients who had been taking 50 mg. or less per day when they contracted varicella and rubeola made an uneventful recovery. The dosage, rather than the duration of cortisone therapy, seemed to be the determining factor. However, complete withdrawal of steroid therapy after prolonged use in high dosages may induce adrenal insufficiency. In patients developing measles or chickenpox while receiving high doses of cortisone or cortisone-like substances, the doses were immediately reduced to an estimated physiological stress level. The dose initially used was 25 mg. of cortisone per day in divided doses, which could be raised to 50 mg. per day. Large doses of gamma globulin should be used for patients with measles and convalescent varicella serum for those with chickenpox. Cortisone may enhance the spread and recrudescence of dormant tuberculosis. Prophylactic antituberculosis therapy in leukemic patients with a positive tuberculin test or family history of tuberculosis is proposed.

Pentylenetetrazol (Metrazol) in Mental Deficiency. H. H. Berman, M. Lazar, O. Noe and H. Schiller. A. M. A. J. Dis. Child. 94:231-233 (Sept.) 1957 [Chicago].

Pentylenetetrazol (Metrazol) has reduced confusion and caused a feeling of well-being in many senile and arteriosclerotic patients. The beneficial effects have been attributed to increased metabolism in the brain. Giessen pointed out that pentylenetetrazol increases the cerebral circulation and the amount of oxygen taken up. The authors administered pentylenetetrazol to 3 groups of retarded children. The first group consisted of 13 boys and 10 girls, whose ages ranged from 1 to 7 years, diagnosed as having mental deficiency due to mongolism. They were all infantile and confined to bed. The second group was composed of 17 boys and 9 girls, whose ages ranged from 4 to 11 years and who were all confined to cribs; these children presented the severest problems in a building housing 250 nonambulatory children. The third group was made up of 72 girls, whose ages ranged from 5 to 17 years and who were housed in one ward. The children were placed on therapy for a period of 9 months and then observed for another period of 6 months. No improvement in intellectual functioning was noted in any of the children which could be directly attributed to the use of pentylenetetrazol. The physical and emotional progress noted was consistent with the usual growth of such children for the period within which they were observed.

UROLOGY

Senile Urethritis in Women. V. H. Youngblood, E. M. Tomlin and J. B. Davis. J. Urol. **78**:150-152 (Aug.) 1957 [Baltimore].

Senile urethritis in women is an atrophic lesion due to a deficiency of endogenous ovarian hormone and manifested by irritative symptoms of the lower urinary tract. From 1951 to 1954 Youngblood used furacin urethral suppositories in about 1,200 women with urethritis. Premenopausal women almost invariably were improved, but a high percentage of postmenopausal women were not. Furacin urethral suppositories, with 0.1 mg. of diethylstilbestrol added, were then tried in 25 postmenopausal women who had previously been treated without success. All subjective and objective symptoms were promptly relieved. This led to the studies described in this paper. Five different types of urethral suppositories, designated only by code letters (their compositions being unknown to the authors) were used in 329 different female patients with urethritis. The ages ranged from 1 to 102 years; 252 (76%) of the 329 women were postmenopausal. All 5 types of suppositories had the identical suppository base. All women with urethritis demonstrable by endoscopy were instructed how to insert suppositories and were given a supply for self-insertion twice daily.

Type A suppositories produced excellent results in nonspecific urethritis of premenopausal women, but no results in the postmenopausal group of patients; this suppository proved to be the standard furacin urethral suppository. Type C produced no improvement in either group; this was a blank control. Type B produced objective benefit, but were uncomfortable to use; these suppositories contained 0.1 mg. of diethylstilbestrol without either anesthetic or antibacterial agents. Excellent results were obtained in postmenopausal women with types D and E. Type D suppositories were used in 112 patients with senile urethritis, and improvement was noted in all; it contained 0.1 mg. of diethylstilbestrol and a topical anesthetic agent. Type E suppositories were employed in 120 patients with senile urethritis, and all of these patients showed more rapid improvement than those treated with type D. Type E was the standard furacin urethral suppository, containing in addition 0.1 mg. of diethylstilbestrol. In every patient with senile urethritis, treatment with estrogen-containing suppositories was followed by improvement, as demonstrated by disappearance of endoscopic signs of urethral irritation, disappearance of senile vaginitis, diminution in size of bladder neck polyps (when present), and an increased elasticity of the urethra as observed on sounding. Some patients required additional treatment for such conditions as caruncle, bladder neck contracture, cystocele, etc., but 91% were relieved with suppository treatment alone.

Glycinuria, a Hereditary Disorder Associated with Nephrolithiasis. A. de Vries, S. Kochwa, J. Lazebnik and others. Am. J. Med. **23**:408-415 (Sept.) 1957 [New York].

Glycinuria, a recently revealed type of aminoaciduria, was detected by chromatographic examination of the urine obtained from a 20-year-old woman with recurrent bilateral nephrolithiasis. A right pyelotomy was performed and a stone the size of a nut was removed from the renal pelvis. The stone was composed mainly of calcium oxalate and contained a small amount of glycine in non-protein, non-peptide form. Chromatographic study of the urine obtained from members of the patient's family showed excessive excretion of glycine with otherwise normal amino acid patterns in the specimens obtained from the patient's sister, mother, and maternal grandmother. The patient's father, her maternal uncle, and the 2-year-old daughter of her sister had normal urinary glycine excretion. None of the members of the family had glucosuria. The patient's sister and the maternal grandmother also had nephrolithiasis. Failure to reabsorb glycine was not associated with defective reabsorption of other amino acids or of phosphate or glucose. It appears that the glycinuria is a dominant sex-limited character. The implication is that glycinuria represents a new inborn error of metabolism of the group characterized by a specific defect in the mechanisms of renal tubular reabsorption.

V 165
1957

OPHTHALMOLOGY

Glaucoma Detection in General Practice. E. Gallardo. Illinois M. J. **112**:115-117 (Sept.) 1957 [Chicago].

The author differentiates 2 main categories of primary glaucoma: the acute and subacute congestive type, also called narrow or shallow angle glaucoma, present in 40 to 45% of cases, and the chronic simple noncongestive, or wide angle glaucoma, comprising about 55 to 60% of the cases. The first type is relatively easy to diagnose in most instances and responds well to therapy. The chronic variety is more difficult to detect, and is often unpredictable in medical as well as surgical management. Both types, together with many of the secondary glaucomas due to uveitis, cataract, trauma, or tumors are characterized by 1 common feature which may be temporary or constant, and that is the elevation of the intraocular pressure. It follows that, in the present state of knowledge, the measurement of this pressure becomes the first and most important step in diagnosis.

Many victims of glaucoma are first seen by the general practitioner, and the detection of a fair number during the early stages could be made in his office with a few questions pertinent to the eye

included in the general history and with tonometry. Recent evidence provided by glaucoma clinics and surveys in large cities indicate that a nation-wide screening program, if properly organized with the cooperation of men in general practice and industrial medicine, would reduce materially the incidence of undetected glaucoma and resultant blindness. The following steps are suggested for the implementation of such a program: (1) the obligatory teaching of tonometry and ophthalmoscopy in medical schools, on the same level of proficiency as auscultation or sphygmomanometry; (2) demonstration of tonometry to medical staff members in all hospitals by ophthalmologists or other trained personnel; (3) occasional showing of a technical film at hospital staff meetings dealing with various aspects of glaucoma; and (4) the production of nontechnical films on glaucoma and other diseases causing blindness for use before lay audiences.

Improvement in Hypertensive Retinopathy Following Adrenal Resection and Sympathectomy: Results in One Hundred Eleven Patients. W. C. Frayer. A. M. A. Arch. Ophth. **58**:331-336 (Sept.) 1957 [Chicago].

The author describes the preoperative and postoperative retinal changes observed in 111 severely hypertensive patients after a total or a subtotal adrenalectomy combined with the Adson or Smithwick type of sympathectomy. Improvement in retinopathy was noted in 87 patients (78.4%). The highest incidence of improvement was observed in patients with severe grades of retinopathy; improvement occurred in 92% of those with grade 3 hypertensive retinopathy, and all the patients with grade 4 hypertensive retinopathy showed improvement. Hemorrhages, exudates, and edema disappeared rapidly, while arteriolar narrowing and irregularity improved more slowly. Improvement in hypertensive retinopathy may appear without improvement in blood pressure after the operation. The degree of arteriolar sclerosis present preoperatively appeared to have little bearing on the final blood pressure response, and this finding could not be applied to the individual patient as a prognostic sign. Improvement in retinopathy is probably the result of diminished peripheral resistance with consequent improvement in retinal blood flow.

THERAPEUTICS

Chemotherapy of Tuberculosis: 1. Antituberculous Activity of Verazide and Related Hydrazones. S. D. Rubbo, J. Edgar and G. Vaughan. Am. Rev. Tuberc. **76**:331-345 (Sept.) 1957 [New York].

In a previous report on Verazide, which is 1-isonicotinyl-2-veratrylidene hydrazine or 3:4-dimethoxybenzal isonicotinylhydrazone, it was shown that the drug exerted a marked antituberculous activity in experimental guinea pig tuberculosis and that the acute toxicity in mice was about one-third that of isoniazid. The present paper deals with a more detailed report on Verazide and related hydrazones. It was shown that the in vitro activity of hydrazone derivatives of isoniazid is equal to that of the parent substance, isoniazid. By using a low critical dosage, 10 mg. per kg. of body weight weekly by intramuscular injection, it was possible to demonstrate differences in chemotherapeutic activity of the various hydrazones. The results of these and other tests showed that Verazide exerted a more marked and more prolonged antituberculous activity than did isoniazid or the other hydrazones. In view of this and of the fact that the hydrazones generally exhibit a significantly lower toxicity than isoniazid, it is considered that some of these derivatives would be more suitable chemotherapeutic agents for the treatment of human tuberculosis than isoniazid itself. Of the hydrazones examined, it appears that Verazide is the drug of choice for clinical application. The mode of action against the tubercle bacillus exhibited by Verazide and isoniazid is of the same type. Resistant mutants are readily isolated which show complete cross-resistance. The metal complexes of isoniazid and the copper complex of Verazide were studied in vitro and in vivo. Although all showed marked antituberculous activity, they had a high degree of toxicity; hence they cannot be considered as potential chemotherapeutic agents.

U. S. Veterans Administration–Armed Forces Cooperative Studies of Tuberculosis: 6. Survival Among Patients with Miliary and Meningeal Tuberculosis (1948-1955). J. H. Williams Jr. Am. Rev. Tuberc. **76**:360-369 (Sept.) 1957 [New York].

The survival rate for 772 patients with miliary, meningeal, or miliary and meningeal tuberculosis treated in hospitals participating in the Veterans Administration–Armed Forces Cooperative Study of the chemotherapy of tuberculosis was determined for different types of antimicrobial agents, including isoniazid-streptomycin, most often with aminosalicylic acid in addition. Since the introduction of isoniazid in 1952, the estimated survival rate 2 years after the start of therapy for miliary tuberculosis was 95%; for meningeal tuberculosis, 80%; and for miliary and meningeal tuberculosis, 77%. The addition of isoniazid to the therapy of miliary tuberculosis has been effective in lowering the incidence of meningitis. Increasing age decreased the probability of survival for patients with miliary and meningeal tuberculosis. The incidence of miliary and of meningeal tuberculosis was higher among nonwhites than among whites. This was evidenced by the fact that, while nonwhites constitute approximately 10% of the veteran population, nearly 50%

of the patients reported in the present study were nonwhite veterans. However, race was not important in the survival of treated patients. Premature or irregular discharge resulted in an increase in the probability of death among patients with tuberculous meningitis.

Treatment of Infantile, Nocturnal Enuresis with Anticholinergic Drugs: A Clinical Study. R. Bertolotto. Minerva pediat. **9**:811-816 (Aug. 11) 1957 (In Italian) [Turin, Italy].

Nine patients, aged from 6 to 17 years, with enuresis were treated with 2 anticholinergic drugs. The first 3 patients were treated with a proprietary preparation of methantheline bromide (Metantyl) in daily doses of 50 mg. at the beginning and larger doses later. The only side-effects observed were dryness of the fauces and slight disturbances of accommodation. Subsequently, the remaining 6 patients were treated with a proprietary preparation of propantheline bromide (Neo-Metantyl) in daily doses of 15-30 mg. at the beginning and larger doses later. No side-effects were observed. The over-all result was superior to that obtained by using the derivatives of belladonna. Each anticholinergic drug was administered first alone, then in association with other preparations with a tonic effect on the sympathetic system, such as strychnine and amphetamine phosphate. The latter drug lessens deep sleep and thus brings the sensation of fulness in the bladder to the threshold of conscious perception.

These patients have been observed for several years. Improvement appeared in most of them after 1 or 2 weeks of therapy. Enuresis seldom reappeared later, and, if it did, it occurred only once or more a month to once or more a year, and was always associated with a mild illness, the approach of cold weather, or an emotional factor. Maintenance therapy was given to some patients after the remission of the condition. In 1 patient, enuresis subsided completely with appearance of the menarche, which apparently removed a preexisting neurohormonal disequilibrium. In another patient, enuresis appeared at the age of 14, and treatment with propantheline bromide caused only initial and temporary relief. The patient's sleep was very deep, and it was extremely hard to awaken him. It seems that the enuresis in this patient is associated with neuropsychic changes.

Treatment of Whooping Cough with a new Antibiotic: Colimycin. I. Lanza and R. Morbidelli. Minerva pediat. **9**:816-822 (Aug. 11) 1957 (In Italian) [Turin, Italy].

Colimycin, an Italian proprietary preparation of an antibiotic which was first developed by Japanese workers under the name of colistin, a fermentation product of "B. colistinus" isolated from the soil, was used for treatment of a small epidemic of whooping cough, which developed in a community center for poor children in Turin in the winter of 1956-1957. Thirty-two children, aged from 1 to 5 years, contracted the disease. The first 14 patients were treated with chloramphenicol palmitate for 8 to 10 days before they were given colimycin therapy; 5 of them began to receive chloramphenicol palmitate at the onset of the paroxysms, and 9 began to receive it later. The daily dose of chloramphenicol palmitate was 50 mg. per kg. of body weight, given 4 times a day for 8 to 10 days. Colimycin therapy was instituted from 8 to 13 days after the appearance of the paroxysms. Results obtained during the first stage of treatment with chloramphenicol palmitate only were poor. A second group of 18 patients was treated with colimycin only. The daily dose of colimycin was 500,000 units for children weighing less than 14 kg. and 1,000,000 units for the others, administered twice a day for 10 days. The patients remained under observation for another 15 days. Two patients developed bronchitis and 1 bronchopneumonia. These complications regressed promptly under penicillin therapy. No other complications or side-effects developed.

In the first group, colimycin therapy, which was introduced rather late, gave good results in 8 patients and fair results in 4; it was ineffective in 2. In the second group, colimycin therapy was introduced early and gave good results in 16 patients and fair results in 2. In these patients colimycin rapidly reduced the frequency and the paroxysmal character of the cough, caused an early disappearance of vomiting, led to gain in weight, and decreased the complications in the respiratory tract. The age of the patients had no effect on the results obtained by the treatment.

Use of Mecamylamine in the Treatment of Arterial Hypertension. C. Giordano, S. Ricciardi and P. Oriente. Gazz. med. ital. **116**:349-351 (Aug.) 1957 (In Italian) [Turin].

Mecamylamine administered by mouth had a pronounced beneficial effect in 18 patients with hypertension who had derived no benefit from previous treatment with other ganglioplegic drugs. Four patients had malignant hypertension, 4 had chronic glomerulonephritis, and the rest had essential hypertension. The patients received an initial dose of 1 mg. of mecamylamine every 12 hours; 10 to 20 mg. per day reduced the blood pressure to normal values. Maximal hypotensive effect occurred 4 to 5 hours after the administration. Some hypotensive effect of the drug was manifest 1 hour after the injection and did not disappear in some patients until 24 to 48 hours after the administration. Ortho-

V 165
1957

static hypotension, at times marked, was observed in all patients. The patients were treated for from 2 to 12 months. A dose of 2 to 4 mg. per day was sufficient to obtain a marked drop in the blood pressure in patients with manifest renal insufficiency and severe hypertension.

Antibiotic Combinations: Tetracycline, Erythromycin, Oleandomycin, and Spiramycin, and Combinations of Tetracycline with Each of the Other Three Agents—Comparisons of Activity in Vitro and Antibacterial Action of Blood after Oral Administration. W. F. Jones and M. Finland. New England J. Med. **257**:481-491 (Sept. 12) and 536-547 (Sept. 19) 1957 [Boston].

Tests were made of the in vitro susceptibility of strains of gram-positive cocci to tetracycline, erythromycin, oleandomycin, and spiramycin and to combinations of tetracycline with each of the others in 3 different ratios. Erythromycin alone was found to be clearly superior to oleandomycin alone and much more active than spiramycin alone against most of the strains, including all strains that were normally sensitive to erythromycin. The cross-resistance among these 3 antibiotics in strains freshly isolated from patients appeared to be quite variable as compared with the regular and essentially complete cross-resistance that developed to all 3 agents in strains repeatedly subcultured in the presence of any 1 of them. Of the various mixtures of antibiotics used, the combinations containing erythromycin were clearly superior to the others, but no combination was superior to the more active of the components used alone. In particular, none of the combinations tested were superior to the better of the 2 agents—erythromycin or tetracycline. No added activity was provided by the presence of tetracycline in any of the mixtures tested against tetracycline-resistant strains.

Normal men were given, in random rotation, oral doses of 1 Gm. of tetracycline, erythromycin, oleandomycin, or spiramycin and 0.5 Gm. each of tetracycline combined with an equal amount of the other 3 antibiotics, and the plasmas of these persons were assayed for activity against 3 organisms, including a sensitive strain of hemolytic streptococcus and a tetracycline-sensitive and a tetracycline-resistant strain of Micrococcus (Staphylococcus) pyogenes var. aureus. Against each of these 3 strains, the activity produced by erythromycin alone was significantly superior to that produced by either oleandomycin or spiramycin alone. The combination containing erythromycin was similarly superior to the others, but none of the combinations produced any greater activity than was derived from the same total dose of the more active component alone. The presence of tetracycline in the combinations did not add to, and may have reduced, the activity of erythromycin or oleandomycin against the tetracycline-resistant Micrococcus.

Controlled comparisons were also made of the antibacterial action of blood of the same persons after the ingestion of 500 mg. of tetracycline alone, and with the addition of 250 mg. of either erythromycin, oleandomycin, or spiramycin. The addition of erythromycin enhanced the activity of the tetracycline to about the expected degree, but the addition of oleandomycin or spiramycin did not produce any measurable increase in activity of the blood over that produced by the 500 mg. of tetracycline alone. This result was reproduced in tests employing 3 different strains, including the 2 sensitive ones used in the previous experiment and a third that was more sensitive to oleandomycin than to erythromycin. Oleandomycin and spiramycin are sufficiently inferior to erythromycin to indicate that their adoption for general use in the treatment of infections is unwarranted and should be discouraged. If these new agents are made available at all, they should be strictly reserved for the treatment of only the rare infections that are definitely proved to be caused by organisms that are highly sensitive to these agents and resistant to erythromycin and to other active antibiotics in common use. The combination of tetracycline with either oleandomycin or spiramycin, especially in any fixed ratio, is not justified by the available data, represents bad practice, and is not in the best interest of the patient.

PATHOLOGY

Klinefelter's Syndrome: Frequency and Testicular Morphology in Relation to Nuclear Sex. M. A. Ferguson-Smith, B. Lennox, W. S. Mack and J. S. S. Stewart. Lancet **2**:167-169 (July 27) 1957 [London].

Of 758 patients attending the male infertility clinic at the Western Infirmary in Glasgow who produced a seminal specimen for analysis, 332 had a sperm count below 40 million per milliliter. Complete absence of sperm was found in 50 men and a count below 1 million in 76. These 126 patients with high-grade subfertility were asked to attend for an oral mucosal smear, and this was obtained in 91 patients. Examination of the nuclei of the oral mucosa by the method of Moore and Barr revealed that 10 men (6 with total azoospermia, 4 with extreme oligospermia) were chromatin-positive, or appeared to be genetic females, and investigation showed that they all had Klinefelter's syndrome (gynecomastia, increase in urinary gonadotropins, and hyalinization of the seminiferous tubules). The authors believe that Klinefelter's syndrome associated with chromatin-positive nuclei (female genetic sex) is responsible for 11% of the cases of

high-grade subfertility in males. Clinical examination of 91 men with high-grade subfertility suggested that 27 (30%) had Klinefelter's syndrome. Testicular biopsy and endocrine assays, in all cases in which they were done, confirmed the clinical diagnoses. All the chromatin-positive patients were included: the remaining 17 were chromatin-negative. Testicular biopsies were performed on 68 patients attending the male infertility clinic. These patients were included in the high-grade subfertility group, and 6 were found to have chromatin-positive Klinefelter's syndrome, while histologically 8 clearly had Klinefelter's syndrome but were chromatin-negative. Assuming that this series of testicular biopsies is unbiased in favor of either form of the syndrome, it may be concluded that approximately 40% of men with Klinefelter's syndrome are chromatin-positive, or genetic females.

Descriptions of testicular histology in Klinefelter's syndrome need revision, for the picture in chromatin-negative and chromatin-positive cases is altogether different. In chromatin-negative (genetic male) cases the interstitial cells are diffusely increased and their cytology remains normal. A large proportion of the seminiferous tubules approximate to the normal size; in all cases a few tubules show some spermatogenesis. In chromatin-positive (genetic female) cases the interstitial cells are aggregated into massive discrete well-vascularized clumps and individually show marked nuclear pleomorphism. Large areas appear to be devoid of tubules, and, of the small number present, by far the majority are "ghost tubules." Spermatogenesis is rare. The gonad in the chromatin-positive (female) cases resembles the organs produced by exposing the ovary to abnormal environments, as in the freemartin, and it may well be that the gonad in these cases can be regarded as a modified ovary and not a testis.

Is Glomus Tumor a Rare Disease? P. Vollset and J. Worm. Tidsskr. norske lægefor. **77**:572-573 (July 1) 1957 (In Norwegian) [Oslo].

Four cases of glomus tumor have been treated in Volda District Hospital since 1955. The first 3 cases, in patients aged from 50 to 75, were localized to the extremities, but only one had the typical subungual localization. In one instance the tumor increased in size. The tumors were blue, bluish red, or gray and varied from the size of a pinhead to the size of an almond. Pain radiated from the tumor and was sometimes spontaneous, but it most often depended on changes in temperature or on local pressure. In the 4th case, in a patient aged 41, with pea-sized tumor on the ankle, there was at times marked pain of 15 minutes' duration localized to the tumor. Treatment of glomus tumors is extirpation. The importance is emphasized of having these tumors in mind in cases of distinct tender skin tumors and sympathetic neuralgias.

PHYSIOLOGY

Observations on the Variability of Total Serum Cholesterol in Johns Hopkins Medical Students. C. B. Thomas and F. F. Eisenberg. J. Chron. Dis. **6**:1-32 (July) 1957 [St. Louis].

As part of a broad investigation of possible precursors of hypertension and coronary artery disease, the total cholesterol levels in blood serum have been determined on 1 or more occasions in successive classes of Johns Hopkins medical students. The long-term objective of these observations is to ascertain whether or not the cholesterol level in early adult life is of predictive value in regard to the future appearance of cardiovascular disease. The present report attempts to establish the norms for a group of subjects by statistical methods and to make relevant comparisons, wherever possible, with other data in the literature. Total serum cholesterol determinations have been obtained from 759 Johns Hopkins medical students on 1 or more occasions by a modification of the Bloor method, designed by Buell to meet the exacting requirements of the clinical chemistry laboratory at the Johns Hopkins Hospital. It is published in detail for the first time. Analysis of 148 pairs of duplicate tests from the same serum sample showed that the over-all reproducibility of the Bloor method thus controlled was very satisfactory and comparable in exactitude to that found in other laboratories using the Schoenheimer-Sperry and Abell methods.

The range of cholesterol levels encountered at first test among 612 students in the classes of 1948 through 1957 lay between 108 and 407 mg. per 100 cc. inclusive; 92.3% of these initial levels lay between 150-299 mg. per 100 cc. inclusive. The mean cholesterol level for the 612 subjects at first test was 228.7 mg. per 100 cc., with a standard deviation of ± 43.3. The range and mean for the 50 women were similar to the findings for the 562 men. The rise of mean cholesterol level with increasing age described by others was verified: in a group of 556 men 19 through 33 years of age, the average cholesterol level increased 2.88 mg. per 100 cc. per year of age. Studies on women in their twenties suggested a similar rise. Repeated determinations over a period of months or years in a given individual showed that the cholesterol level does not always rise with age. Healthy medical students not only varied widely as to the height of the total serum cholesterol level but they differed also re-

V 16
1957

garding cholesterol stability, some being more stable than others. Not only age, sex, and heredity, but racial origin, occupation, and body build have been shown to be factors. The increasing importance of the composition of the diet is reflected in the current medical literature; high cholesterol levels have been found to be correlated with high fat intake and low cholesterol levels with low fat content of the diet. The influence of various forms of stress upon the cholesterol level in human subjects is beginning to be explored.

Serum Lipid Levels in Normal Persons: Findings of a Cooperative Study of Lipoproteins and Atherosclerosis. L. A. Lewis, S. Olmsted, I. H. Page and others. Circulation **16**:227-245 (Aug.) 1957 [New York].

Measurements of the 2 lipoprotein fractions, S_f 12-20 and S_f 20-100, and total serum cholesterol carried out in 33 different population sources are reported. The chosen groups were sufficiently stable and could be followed for 1 or more years. Two groups, the Los Angeles Civil Service Study and the Framingham Heart Study, were preexisting cardiovascular study groups. Prisoners at federal penitentiaries and volunteers from their staffs formed 3 other source groups. The remainder of the sources were employee and managerial groups, including industrial workers, clerks, university employees, and executives. The general similarity of lipid levels for the various sources was noteworthy, whereas the average levels of the lipoprotein fractions and serum cholesterol varied from source to source. The Los Angeles group was notable for high-average levels of cholesterol and S_f 12-20 and for a low level of S_f 20-100. The prisoner group was distinguished by low levels both for the lipoprotein fractions and for serum cholesterol. No convincing explanation could be given for either of these exceptions. The study groups were preponderantly white. Data from nonwhites, who were almost all Negroes, came primarily from the Los Angeles and the prisoner group and were too small to allow a clear characterization of lipid levels. The levels for nonwhites were closer to those of the white members of these 2 groups than to the levels of the general population. The serum cholesterol level rose in both sexes after the 20th year of age, but at first the rise was much greater in men than in women. The rise continued up to the age of 62. The level for men reached a peak at the age of 55, after which it declined. The relation of age and sex to lipid level for S_f 12-20 and S_f 20-100 was similar to that for cholesterol. Hypertension or obesity was associated with some elevation of lipid levels. In the age group 40-to-59, S_f 20-100 exhibited a definite race and sex differential, and had the highest correlation with weight and blood pressure. It appeared to be the most sensitive of the 3 lipid measures.

Intercoronary Anastomoses as They Appear in Angiography After Death. M. M. Vastesaeger, P. P. Van Der Straeten, J. Friart and others. Acta Cardiol **12**:365-401 (No. 4) 1957 (In French) [Brussels].

Perfusion and the injection of radio-opaque substances, followed by radiography, were used in making a systematic search for intercoronary anastomoses in several species of animals (calf, pig, sheep, horse, and dog). Anastomoses were demonstrated with a frequency that varied from 1 species to another and from 1 individual to another within the same species. A similar variation from species to species and from individual to individual also appeared in the caliber of the anastomoses. Those found in calves' hearts were at least as large as arterioles and often attained the size of a small artery, while those found in the hearts of pigs, and still more in those of sheep, were smaller and less constant. The vessels thus demonstrated were present in the hearts of animals unquestionably free from atherosclerotic lesions of any kind; moreover, all due allowances being made, at least as many intercoronary anastomoses were found in the hearts of young as in the hearts of adult animals. The findings obtained in the animal studies thus contradict both the theory that intercoronary anastomoses are a means of defense against coronary stenosis and the suggestion that they increase in frequency and size with age.

The same methods of perfusion and injection, followed by radiography, were used in investigating the presence of intercoronary anastomoses in the human heart. Anastomotic vessels with a caliber of 200 μ, or the size of a small artery, were found in 6 of 7 fetal hearts, proving that intercoronary anastomoses may be, and often are, present before birth. Arteriolar or larger anastomoses were also demonstrable in 87.5% of 120 adult human hearts and were almost equally frequent whether the patients had or had not had coronary arterial disease. Some of the larger anastomoses had a caliber of as much as 1 mm., regardless of the existence or nonexistence of atheroma in the coronary network.

The purpose of these studies was purely anatomical and no attempt was made to determine the functional value of the anastomoses. The findings clearly show that they are congenital in character, but although arteriosclerotic occlusion apparently cannot create new anastomotic channels, it may lead to functional hypertrophy of those already in existence.

BOOK REVIEWS

Plastic Arterial Grafts. By W. Sterling Edwards, M.D., Assistant Professor of Surgery, Medical College of Alabama, Birmingham. Cloth. $4.50. Pp. 126, with 22 illustrations. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill.; Blackwell Scientific Publications, 24-25 Broad St., Oxford, England; Ryerson Press, 299 Queen St., W., Toronto 2B, Canada, 1957.

This monograph is a reflection of the intensive investigations and rapid strides that have taken place in recent years in the field of arterial surgery. It is concerned primarily with the development of a plastic arterial graft that has proved to be functionally satisfactory. Although admittedly not the ultimate in synthetic grafts, there is good reason to believe that it provides a long step toward the objective of a completely acceptable replacement for arterial homografts. The author and his associates deserve much credit for their contribution toward this goal and particularly for the adoption of the crimping principle in the design of their graft, an important factor in making it functionally satisfactory. The first two chapters deal with the history of arterial grafts and with the development of the crimped nylon tubes used by the author and his associates. The chemical and textile characteristics of the various synthetic materials from which arterial replacements may be made are well described, and the advantages and disadvantages of each are discussed. In the historical section a significant omission in the clinical account of the application of grafts is the failure to refer to Oudot, who reported the first case of Leriche's syndrome treated by resection and homograft replacement.

The remaining chapters deal with the clinical application of crimped nylon tubes for various vascular problems. In these sections of the monograph the author has relied heavily on the literature and not on clinical experience. Thus, certain technical methods are presented virtually as standard routine procedures, which, although useful in specialized circumstances, are not the most effective means of dealing with many other types of lesions. The bypass principle, for example, which the author describes and recommends strongly is undoubtedly highly desirable, but it is not always the most satisfactory or the most appropriate procedure to employ. The weakest section of the monograph, however, is the chapter dealing with aneurysms of the thoracic aorta, which is based almost entirely on a review of the literature and theoretical considerations. This is well exemplified by the two illustrations used in this section. One of these is a photograph of a nylon bypass in the thoracic aorta of a dog and the other is a diagram of a nylon bypass for a thoracic aneurysm, regarding which the author admits that the clinical opportunity to carry out this experiment has not yet presented itself. Despite these weaknesses in the presentation of clinical applications of grafting procedures, this monograph is a valuable contribution, especially in its consideration of arterial substitutes. The author wisely predicted that further advances would be made in the development of these synthetic grafts which would overcome such limitations of the present nylon tube as fraying of the cut edges and the necessity for heat sealing of these edges, the lack of branches, and the rigidity of the aortic segment. Indeed, his prediction has already been realized, since such an arterial substitute is now available.

These book reviews have been prepared by competent authorities but do not represent the opinions of any medical or other organization unless specifically so stated.

Health and Medical Care in New York City: A Report by the Committee for the Special Research Project in the Health Insurance Plan of Greater New York. Cloth. $7.50. Pp. 275, with illustrations. Published for Commonwealth Fund by Harvard University Press, Cambridge 38, Mass.; Oxford University Press, Amen House, Warwick Sq., London, E. C. 4, England, 1957.

This volume is the initial report of a questionnaire survey on health and medical care undertaken in New York City in 1952 under the auspices of a special study group of the Health Insurance Plan of Greater New York (H. I. P.). Outlined are the objectives of this study: to examine the extent to which the New York City population is covered by insurance for hospitalization and medical care, and the extent to which persons are covered by more than one insurance plan; to study the demographic and social characteristics of the general New York City population, of the population covered by H. I. P., and of the population covered by other insurance plans; to compare the medical needs of the population of New York City and of the group insured by H. I. P.; to compare the amount of medical care, including preventive services, received by the general population and by the H. I. P. group; to compare the amount of unattended illness in the general population and in the H. I. P. group; to attempt to develop broad indexes of quality of medical care needs, the services received, and the quality of care received by the New York population; to learn the extent to which medical care is sought by the H. I. P. enrollees outside the H. I. P. system; to determine whether it is possible to estimate from the H. I. P. experience, on a continuing basis, the total morbidity and the needed

V 16
1957

services for the total population of New York City; and to obtain experience of value in the development of improved studies of this type. Because of the limits of time and money, these objectives are not all realized in this volume. Information is presented on the quantitative aspects of insurance coverage, sick leave status, physician contact, families with family physicians, pediatric services used, medical conditions in specified time periods, days of illness and/or hospitalization, dental conditions, and periodic medical examinations.

Since there is available so little reliable information about the impact of a prepaid medical care program on the health of the participants, great hopes were held that this study would produce valid objective data that would be useful to those concerned with the development of soundly based medical care programs. These high hopes seem not to have been realized. This book is carefully and candidly written. The problems faced and some of the inadequacies of the data recorded are stated frankly. Unfortunately, most of this is presented in the appendix at the end of a long series of statistical tables. Hence, readers might tend to accept the well-prepared summaries of each chapter as being adequate conclusions. Were it not for the implications raised by the brief summaries and the vast amount of time and money that went into the study, a summary of what the committee set out to do and what was accomplished could have been presented as a preliminary report.

In order to achieve the best possible medical care program with as little misdirection of time and money as possible, one must have reliable data. However, the state of the material presented is such that no physician, health officer, insurance company, or administrator could base his action on it. A comparison of the objectives with the results indicates very few achievements. Although definite conclusions are avoided, the statistics are marshalled and presented in a manner to bring out only one inference in the minds of the readers—that the medical care given to the participants of H. I. P. is much better than that received by others. The committee reports, "The data . . . showed that more H. I. P. enrollees had contacts with physicians, had family doctors, had pediatric care for their children and received dental attention [although dental care is not covered by H. I. P.] than did the general population. If these conditions carry any implications for early diagnosis and health education at the hands of doctors, it would seem that the H. I. P. enrollees were receiving more health care and guidance than were the counterparts in the general population" (page 189). It is doubtful that this conclusion is warranted. Even if it were, does the finding indicate more than that those who are enrolled in high-premium medical care plans obtain more services than those enrolled in lower premium plans, or those not enrolled in any plan?

Studies of the health and medical care of enrollees in different prepaid medical care programs are needed. This expensive study must be regarded as a preliminary contribution to the field of medical economics and as an exploration into the problems of making definitive comparisons of different medical care plans. It does not provide a set of findings, but it is a device for measuring the impact of a medical care plan on its members. In summary, it is a *pro forma* statement of possible sampling procedures for establishing characteristics of a particular plan.

Clinical Gastroenterology. By Eddy D. Palmer, M.D., F.A.C.P. Cloth. $18.50. Pp. 630, with 216 illustrations, [art work] by Phyllis Anderson. Paul B. Hoeber, Inc. (medical book department of Harper & Brothers), 49 E. 33rd St., New York 16, 1957.

The literature on gastroenterology is becoming so voluminous that it is small wonder that guides, manuals, and synopses have become necessary to acquaint the busy practitioner with what is going on. This exhaustive guide is designed for this purpose and especially for those whose main interest is bedside medicine. The opening chapter on comprehensive gastroenterology, in which exaggerated value is given interview therapy ("autotherapy"), should prove interesting but of limited practical assistance to physicians engaged in private practice. Drugs and diets receive small attention throughout the book and are poorly rated, particularly for the treatment of peptic ulcer, irritated colon, ulcerative colitis, and other disorders. In the case of uncomplicated duodenal ulcer, for instance, it is suggested that the results of interview therapy are so good that it becomes necessary "to destroy the monster of dietary invalidism and to give special support to those who have been trapped into the further invalidism of forced pharmacotherpeusis." The average physician engaged in office and bedside practice knows that patients expect and require drugs and diets, and he who does not prescribe them fails in justice to his patient and himself. Many drugs in the U. S. Pharmacopeia are exceedingly helpful if one would learn how to use them. The use of diets in many gastrointestinal diseases is indispensable, but it stands to reason that they should be designed to meet the convenience and practical needs of the individual patient.

Aside from the conventional chapters, which are adequate, there are chapters on the extrahapatic biliary tract, stomach operations and the post operative stomach, gastrointestinal bleeding, the liver, portal hypertension and esophageal varices, and the pancreas and spleen which are particularly worthwhile. Short chapters on the salmonelloses, helminthology, and food poisoning also contribute to the usefulness of the book. While Dr. Palmer has been exceedingly active in the general area of

gastroenterology and has been a prolific contributor to the literature, his approach is that of one who has been chiefly engaged in clinical research. His methods do not lend themselves advantageously to the physician engaged in office and bedside practice. However, his opinions are challenging, refreshing, and provocative. Reader interest is secured, in no small measure, by a thoroughly good job on the part of the publisher.

Diseases of the External Ear. By Ben H. Senturia, A.B., M.D., Associate Professor of Clinical Otolaryngology, Washington University School of Medicine, St. Louis. With assistance of Carl F. Gessert, Ph.D., and others. Publication no. 319, American Lecture Series, a monograph in Bannerstone Division of American Lectures in Otolaryngology. Edited by Norton Canfield, M.D., Associate Clinical Professor of Otolaryngology, Yale University, School of Medicine, New Haven, Conn. Cloth. $8.50. Pp. 211, with illustrations. Charles C Thomas, Publisher, 301-327 E. Lawrence Ave., Springfield, Ill.; Blackwell Scientific Publications, 24-25 Broad St., Oxford, England; Ryerson Press, 299 Queen St., W., Toronto 2B, Canada, 1957.

This excellent monograph is the work of 11 contributors, who present every known facet of the subject of diseases of the external ear. A number of experiments on the properties of cerumen in vitro and in vivo are cited in detail. The implication is that the conditions predisposing to external otitis are those in which the production of cerumen is reduced and the ideal therapy would be its replacement. Unfortunately, the solution of the problem has not been so simple. Thus, the final chapter is primarily a review of the treatment most commonly used. The treatment of each type of external otitis is presented in a simple and practical manner. A dependable method of diagnosis and treatment of external otitis is needed. The important contributions of this monograph are the excellent presentations of the anatomy and histopathology of the external auditory canal in terms of alterations in acute and chronic infections and of conditions that predispose to such infections. The literature is excellently reviewed in 437 bibliographic references, but so many authors are quoted with almost equal emphasis that important factors are not always adequately stressed. Generally there seems to be a tendency to wide inclusion rather than to critical selection.

Functional Neuro-Anatomy Including an Atlas of the Brain Stem. By A. R. Buchanan, M.D., Professor of Anatomy, University of Colorado School of Medicine, Denver. Third edition. Cloth. $7.50. Pp. 362, with 273 illustrations. Lea & Febiger, 600 S. Washington Sq., Philadelphia 6, 1957.

This third edition of a basic textbook for medical students is designed to present only the most essential material in an integrated fashion with respect to function. Attempts have been made to condense, simplify, and systematize pertinent material so that it can be integrated with concurrent anatomical courses. The text presents abbreviated discussions and schematic diagrams of the various systems of the neuraxis rather than the so-called level anatomy found in the classic neuroanatomical works. According to the author, this approach stimulates and sustains the interest of the student, eliminates the confusion associated with assembling and organizing a prodigious number of facts, and affords a greater perspective of functional considerations. Revisions noted in the new edition consist of alteration of chapter sequence, inclusion within the text of recent functional concepts concerning the reticular formation and feedback mechanisms, and replacement of a few illustrations. The atlas of the brain stem included in the back of the book remains unchanged. An illustration of the level and orientation of the sections, repeated 37 times on as many pages, appears to be a great waste of space. The format of the book is good. The illustrations are clearly reproduced and the diagrams of the various neural pathways are easily understood. For most medical students the text would not seem sufficiently detailed to use without additional reference material. The reader must integrate the various systems of the neuraxis with each other and reestablish their relationships in a unified complex. For some students this may present a problem. The incorporation of short paragraphs dealing with the symptoms of pernicious anemia, amyotrophic lateral sclerosis, and certain diseases of the basal ganglia go beyond the needs of the first year student and the object of the text. This book provides a satisfactory survey of neuroanatomy and should be useful to neurologists and neurosurgeons who need to review their knowledge of the subject.

An Atlas of the Commoner Skin Diseases. By Henry C. G. Semon, M.A., D.M., F.R.C.P. Revised with collaboration of Harold T. H. Wilson, M.A., M.D., M.R.C.P. Colour photography originally directed by the late Arnold Moritz, B.A., M.B., B.C. Fifth edition. Cloth. $20. Pp. 375, with 153 plates reproduced by direct colour photography from living subject. Williams & Wilkins Company, Mount Royal and Guilford Aves., Baltimore 2; [John Wright & Sons, Ltd., 42-44 Triangle West, Bristol 8, England], 1957.

This is a superbly produced atlas that has been popular through four previous editions. It contains 153 excellent full-paged color photographs of the skin lesions most often seen in office practice. On facing pages are brief clinical descriptions of each dermatosis and outlines of differential diagnosis and therapy. The diseases are arranged alphabetically. The clinical discussions are presented in a readable, conversational style. Sixteen new color plates have been added, and the sections on therapy have been brought up to date. This book should serve as a useful aid in diagnosis and therapy for students and practitioners.

V 165
1957

QUERIES AND MINOR NOTES

INTERMITTENT HYPERTENSION

To the Editor:—*An increasing number of patients note symptoms and signs of sudden increase and decrease in pulse rate and blood pressure, a feeling of tightness in the chest, and an occasional missed heartbeat. While being examined, these patients show a changing pulse rate of between 80 and 120 per minute and blood pressure between 150 and 190 mm. Hg systolic, and this variation often occurs within seconds. There is less change in the diastolic pressure, which varies between 130 and 150 mm. Hg. These patients take their pulse rates at home and find them usually normal, around 70. They seldom have headaches and do not perspire excessively. They admit being nervous and are very upset if they come to the office. The blood pressure usually goes down after the patient has been talked to quietly for a while. The phentolamine (Regitine) test is always negative. The patients are between 25 and 30 years old. Is this real essential hypertension, or may it lead to it? Rauwolfia preparations do not seem to help. It looks as if a sudden discharge of epinephrine may occur. What is the cause of the symptoms? Is there some medicament available for treatment?*

M.D., New Jersey.

Answer.—The patients in question have intermittent hypertension, both systolic and diastolic. The hypertensive episodes are almost surely not manifestations of pheochromocytoma (epinephrine and/or norepinephrine discharge), for this tumor is rare and would not be observed in "increasing number of patients" by any one observer. Moreover, the negative phentolamine test in an individual with so high a diastolic pressure makes pheochromocytoma very unlikely. It is highly probable that the patients in question are in the early stages of essential hypertension. Most often, if not always, essential hypertension passes through a stage of intermittent hypertension which may last for years. A purely emotional rise in blood pressure in an individual not developing essential hypertension would hardly reach a diastolic level of 150 mm. Hg. In the experience of this consultant, which includes large numbers of hypertensive patients over a period of more than 30 years, the vast majority of individuals with intermittent hypertension ultimately develop sustained hypertension. Rauwolfia preparations are probably the best pharmacological agents available at present for such highly emotional individuals with intermittent hypertension and tachycardia, but careful watch should be kept for depression or Parkinsonism. However, many cases of this type are best managed by reassurance and great care on the part of the physician to avoid overemphasis on the hypertension; it is wise to omit the use of the sphygmomanometer during some of the patient's visits.

The answers here published have been prepared by competent authorities. They do not, however, represent the opinions of any medical or other organization unless specifically so stated in the reply. Anonymous communications cannot be answered. Every letter must contain the writer's name and address, but these will be omitted on request.

TREATMENT OF CONGENITAL MACROGLOSSIA

To the Editor:—*What is the best treatment for congenital macroglossia in a baby 4 months old? If surgery is indicated, when is the best time to operate?*

M.D., Mexico.

Answer.—The macroglossia is either on a muscular basis or on a lymphangiomatous basis. The type of treatment will depend upon the size of the tongue itself and its resultant effect upon the nutrition of the child, i. e., whether or not the child is able to nurse or take its feeding, and also upon whether the condition is unilateral or bilateral. If the amount of the enlargement does not interfere with the child's feeding, then it is advisable to delay any active surgery for reducing the size of the tongue until a more opportune time. If, however, the nutrition of the child is impaired as a result of the increased size of the organ, treatment should be undertaken as soon as is feasible in order to permit the child to take its nourishment.

If the lesion is on a vascular basis, some have advised the use of radium. Radium is effective in a capillary type of lesion but seldom in a cavernous type of lesion. Some have advised and used repeated fulgurations or electrocoagulation in order to minimize the amount of surgical shock. This method has been used very effectively. It is not effective in the muscular type of macroglossia, nor is the use of radium effective in the muscular type. Marginal excision of the tongue in both the lymphangiomatous and muscular types has given excellent results. If the lesion is unilateral, then it may be advisable to ligate the lingual artery before attempting the excision. In this manner the amount of bleeding is reduced to a minimum. In a bilateral case, ligation of the lingual arteries is contraindicated.

ABORTION FOLLOWING RADIOACTIVE IODINE THERAPY

To the Editor:—*A 35-year-old woman had a thyroidectomy 15 years ago for hyperthyroidism, after which she developed exophthalmos. She had a normal pregnancy and delivery 14 years ago, except for a threatened abortion. Six years ago she received radioactive iodine (I^{131}) for return of thyrotoxic symptoms and one year later another dose was given. Since then she has had no more toxic symptoms. One year ago she had a missed abortion and another two weeks ago. Could there be any relationship between the I^{131} therapy and the missed abortions? If so, is there any feasibility of a future pregnancy going to term?*

Edward R. Barbar, M.D., Lancaster, N. C.

Answer.—There is no direct relationship between the two recent abortions and the administration of I^{131} five years previously. The radioactivity induced by the iodine disappears in about two months. However, the radioactivity undoubtedly resulted in rather extensive destruction of thyroid tissue. As a result of these changes, the patient may have developed a marked hypometabolism which may be an important factor in the missed abortions. The patient should be subjected to a complete study of thyroid function, which should include serum protein-bound iodine and serum cholesterol level determinations, iodine uptake studies, and a basal metabolism determination. Should hypometabolism be demonstrated, adequate substitution therapy is indicated prior to an attempt at a new pregnancy. If the thyroid function is normal, the patient may be an habitual aborter, and suitable therapy for this condition should be considered.

USE OF EXPECTORANTS

To the Editor:—*A rather dogmatic statement recently appeared in the medical literature in regard to the efficacy of our time-honored use of expectorants. It was contended that all drugs in this category were primarily nauseants and effected only increased salivary flow without directly inducing bronchorrhea. This is somewhat contrary to the usual clinical experience. Please comment on this problem, which has widespread clinical implication.* *M.D., California.*

Answer.—Many others would join the inquirer in questioning the dogmatic statement regarding the efficacy of expectorants. No mention is made of the various types of expectorants other than the nauseants. Some expectorants stimulate the mucosa directly, others act by decreasing the viscosity of mucus. Patients who receive enteric-coated iodide and ammonium chloride preparations do not complain of nausea, but they frequently comment upon their increased nasal and bronchial secretions. Similar reactions are often noted after the use of iodide contrast mediums in roentgenography. At one time these agents were actually used locally as therapy in bronchiectasis, and their use was discontinued only because of the deleterious pulmonic effects of the oils in which they were dissolved.

AGE AND PREGNANCY

To the Editor:—*What is the possibility, in terms of percentage, of a 30-year-old woman compared to a 20-year-old woman having one, two, or three pregnancies? Both recently married 30-year-old men.* *M.D., Missouri.*

Answer.—There are no figures available which give the mother's age, the order of birth, and also the age of the father. While the effect of the male element here may not be identical for both women, it will probably be substantially the same, as each woman is married to a 30-year-old man, so it can be disregarded. Birth records are published by five-year periods. The 20-year-old woman falls into the 20 to 24 year age group; the 30-year-old woman falls into the 30 to 34 year one. These two groups were compared. Percentages were derived by dividing the total female population in the group by the number of births in that group. The figures, as of 1951, for the United States follow:

Age	First Child	Second Child	Third Child
20-24	8.3%	6.9%	3.2%
30-34	1.3%	2.6%	2.4%
Ratio between 20 and 30 year age groups.	32 to 5	8 to 3	4 to 3

It will be seen at a glance that the statistics favor the younger woman. The extent of that favor in each category may be seen by inspecting the ratio that the percentages of one age group bear to the other.

LOW HEMOGLOBIN LEVEL IN THE MALE

To the Editor:—*A man has a hemoglobin level (12.8 Gm. per 100 cc.) that is 85% of normal. While there is no apparent organic cause for this anemia, the patient's one complaint is tiredness. His physical examination and history are negative. The hemoglobin level has been determined by the sodium carbonate method on three different occasions and ranges from 80 to 85%. Blood cell count, blood platelet count, bone marrow studies, and blood volume were within normal limits. Will medication or diet help bring up the hemoglobin level? Is a level of 80 to 85% one to be concerned about? What are the possible reasons for this anemia?* *M.D., New York.*

Answer.—A hemoglobin level of 12.8 Gm. is slightly lower than the value one would expect (16 ± 2 Gm.) in the majority of adult males, but it is definitely not low enough to cause symptoms of itself. Reasons for the moderate reduction would en-

V 16
1957

compass all possible causes of anemia and would have to be determined by careful medical evaluation. Diet could not be expected to raise the hemoglobin level. Rational therapy could be prescribed only when the cause had been determined.

HARMFUL EFFECTS OF DAILY ENEMA

To the Editor:—*I could not refrain from writing you regarding the consultant's reply in the Queries and Minor Notes section of* J. A. M. A., *May 25, 1957, page 508, on the subject of harmful effects of daily enema. It seems most unreasonable to expect that a person taking an enema on a short term basis, e. g., for several days, should be expected to have endoscopic control.*

Sidney G. Page Jr., M.D.
Medical Arts Building
Richmond 19, Va.

The above comment was referred to the consultant who answered the original query, and his reply follows.—Ed.

To the Editor:—*The original reply was rendered primarily with reference to the background of a patient who had been using a concentrated salt enema daily for about two years. The long-term use of conventional or concentrated enemas is decidedly unphysiological and should be discouraged if not condemned. At the present, in the proctologic practice of this consultant, a concentrated salt enema is never administered for the first time before a rectoscopy, at least, has been done. However, for practical reasons, such an enema is administered on occasion (e.g. prior to a nonintestinal operation) to persons who do not have symptoms suggestive of intestinal disease. The deleterious effects noted after single concentrated salt enemas consisted of hyperemia or injection of the mucosa and reactivation or exacerbation of a latent (previously undiagnosed or unsuspected) proctosigmoiditis that supervenes on constipation. In these cases a history of true diarrhea or bleeding is frequently not obtained. It should be noted that after the introduction of a concentrated salt enema which contained hydrogen peroxide, this consultant began to see an accelerated number of moderate to severe cases of hemorrhagic proctitis following its use. Hydrogen peroxide has since been deleted by the manufacturer.*

Anyone who performs an endoscopy after a wait of 30 minutes or more following the installation of a concentrated salt solution into the rectum will bear witness to the fact that mucus may be present in such an abundance as to necessitate its removal by mechanical means to make endoscopy possible. When ". . . 4 patients were sigmoidoscoped approximately two hours after evacuation of the enema solution, . . . mucus in considerable quantities was encountered in 2 patients, and to a lesser degree in 2 other patients." "Mucus of slight degree was noted in 10 cases and somewhat more pronounced in 2 cases" on sigmoidoscopy performed after bowel evacuation (presumably after about 15 minutes) (Gastroenterology **32**:748, *1957). It should be stressed that passage of mucus, no matter how produced, has been known to be of concern or disturbing to some patients (e.g. those with irritable colons). Finally, this consultant has observed that some patients, after the use of anal dilators for some time, have developed perverted habits or psychosexual problems that were difficult to break. This is also sometimes observed in patients with severe anal pruritus who treat themselves for some time with topical medicaments.*

TREATMENT OF ACNE

To the Editor:—*Referring to the query and minor note "Treatment of Acne" in* The Journal *(July 13, 1957, page 1291) and the comment on this query in* The Journal *(Sept. 21, 1957, page 316), I wish to say that one does not control acne by the use of any one measure. Several things one does to the individual patient contribute materially to his or her improvement. A diet is, to my notion, essential, the restriction upon milk being the key item, for I surmise that milk contains a hormonal stimulant of human sebaceous glands. Even skimmed milk should not be used as a beverage. It has been almost 20 years since I published the observation that milk has an ill effect on acne. Some people believe this, others do not, and still others have never heard of the opinion. The clinical test of it is extraordinarily simple: give the patient another quart of milk a day to drink and see what happens: take milk away from him and see what happens.*

The endocrine state should be balanced. Many of the patients need thyroid, in a correct dosage; many of them need estrogenic hormones; many need both; some need neither. Topical applications do not significantly influence the acne process, for it is deeply seated. Sebaceous material below the surface of the skin acts as a foreign body that provokes inflammatory reaction, and this is what is clinically called acne. When the response to hormone therapy seems to decline, the cause may lie in the patient's loss of interest in the diet or in taking pills. Or, some other influence, such as increased emotional tension, may appertain. The child, during the school months, is likely to have worse acne than during vacation months, or the child may be enmeshed in extracurricular activities such that sleep is inadequate and tension exceeds that which is consistent with well-being. In "Diseases of the Skin" (ed. 11, St. Louis, C. V. Mosby Company, 1956) I have devoted about seven pages to a tightly written and

documented discussion along these lines and have above outlined an extremely brief condensation of the message I wished to convey in the book.

Richard L. Sutton Jr., M.D.
411 Nichols Rd.
Kansas City 12, Mo.

ROUTINE USE OF VITAMIN K IN OBSTETRICS

To the Editor:—*In the query and minor note on the routine use of vitamin K in obstetrics in* The Journal *(Oct. 19, 1957, page 911) the consultant seems to give an inconsistent answer. He begins his discussion by stating that it has not been proved that there is any need for the routine use of vitamin K; yet later he advises that "it should be given to all infants suspected of having cerebral hemorrhage." Irrespective of the Chicago statistics which he quotes, the following facts are established: 1. Many newborn infants develop a significant drop in prothrombin activity as measured by the one-stage method. 2. A potential hemorrhagic state exists when the prothrombin activity is less than 25% of normal. 3. This decrease in prothrombin activity can be prevented by giving the mother small doses of an inexpensive synthetic vitamin K preparation. 4. Serious hemorrhage can occur from minor trauma in hypoprothrombinemia. During the past few years several cases of severe hemorrhagic disease of the newborn infant with low prothrombin activity which responded promptly to vitamin K were seen in Milwaukee. It seems odd that there is still quibbling about giving vitamin K in one of the few conditions in which it is logically indicated, especially when the agent is given indiscriminately for all types of bleeding conditions in which it is worthless and, perhaps, sometimes even harmful.*

Armand J. Quick, M.D.
Professor of Biochemistry
Marquette University
Milwaukee, Wis.

The above comment was referred to the consultant who answered the original query, and his reply follows.—Ed.

To the Editor:—*The writer is correct in saying that the prothrombin time is prolonged in the majority of newborn infants and that this is corrected by the administration of vitamin K. However, clinical studies (Parks, 1942; Potke, 1945; Hay, 1951; and Sanford, 1942) have not shown that vitamin K has significantly reduced infant mortality nor hemorrhagic disease. Many infants with excessively prolonged prothrombin time do not bleed, while others manifest hemorrhagic signs with little prolongation. There is no proof, therefore, that prolongation of prothrombin time is the sole cause of hemorrhage. Moreover, recent reports by Meyer and Angus (*Arch. Dis. Childhood **31**:*212, 1956) have shown that large doses of vitamin K in premature infants may increase the risk of development of kernicterus by raising the already high level of serum bilirubin. Hence, vitamin K is not completely innocuous, as was previously thought. I am inclined to agree that vitamin K should be given, but not routinely, only in those cases where complications are suspected.*

STERILIZATION OF SHOES

To the Editor:—*In the Sept. 7, 1957, issue of* The Journal, *page 116, in the section, Queries and Minor Notes, an inquiry appeared regarding the sterilization of shoes. The two consultants both admitted that at present there is no practical means of doing this. There is, however, a method by which it is possible to render shoes sterile without in any way damaging or changing the physical characteristics of the leather, fabric, or rubber, as the case may be. This is by the use of ethylene oxide in the gaseous phase. This method of sterilization has been widely used in industry for many years for the sterilization of penicillin, intravenous plastic tubing, and a wide variety of other heat labile substances. However, the high pressures involved in handling the gas and the explosive hazard has not made it practical for use in physicians' offices, homes, or business establishments. Recently, however, the development of a mixture of ethylene oxide and inert halogenated hydrocarbons has rendered the material nonexplosive and easy to handle and has opened the way for the application of ethylene oxide sterilization for medical and commercial purposes.*

By modifying equipment slightly, we have successfully sterilized clothes, mattresses, pillows, and a variety of other things, including shoes. There is a reasonable possibility that within the next few months commercial equipment will be available for inexpensive sterilization of shoes for use in roller skating rinks, bowling alleys, etc. I will be pleased to furnish further details to anyone interested in this problem.

J. R. Leonards, M.D., Ph.D.
Western Reserve University
Cleveland 6, Ohio.

The above comment was referred to the consultant who answered the original query and his reply follows.—Ed.

To the Editor:—*The method of sterilization of shoes suggested by the correspondent is worthy of a trial if the product is inert and does not cause sensitization. Study by reliable institutions should be performed to verify the claims of the company.*

V 165
1957

JOURNALS ABSTRACTED IN THE CURRENT MEDICAL LITERATURE DEPARTMENT, SEPTEMBER-DECEMBER 1957

Abstracts have been made of important articles in the following journals in the Current Medical Literature Department of THE JOURNAL during the past four months. Any of the journals, except those starred, will be lent by the Library of the American Medical Association to individuals in Continental United States and Canada who subscribe to its scientific periodicals and to members of the American Medical Association and its student organization. No charge is made to members, but the fee for other borrowers is 15 cents in stamps for each periodical. Three journals may be borrowed at a time for a period not exceeding five days. Thus most of these journals are accessible to the general practitioner.

*A. M. A. Archives of Dermatology. Chicago.
*A. M. A. Archives of Industrial Health. Chicago.
*A. M. A. Archives of Internal Medicine. Chicago.
*A. M. A. Archives of Neurology and Psychiatry. Chicago.
*A. M. A. Archives of Ophthalmology. Chicago.
*A. M. A. Archives of Otolaryngology. Chicago.
*A. M. A. Archives of Pathology. Chicago.
*A. M. A. Archives of Surgery. Chicago.
*A. M. A. Journal of Diseases of Children. Chicago.
Acta allergologica. Copenhagen.
Acta cardiologica. Brussels.
Acta chirurgica scandinavica. Stockholm.
Acta clinica belgica. Brussels.
Acta medica scandinavica. Stockholm.
Acta neurologica latinoamericana. Buenos Aires.
Acta obstetrica et gynecologica scandinavica. Stockholm.
Acta paediatrica. Uppsala.
Aggiornamenti sulle malattie da infezione. Rome.
American Heart Journal. St. Louis.
American Journal of Clinical Pathology. Baltimore.
American Journal of Digestive Diseases. New York.
American Journal of Gastroenterology. New York.
American Journal of the Medical Sciences. Philadelphia.
American Journal of Medicine. New York.
American Journal of Obstetrics and Gynecology. St. Louis.
American Journal of Ophthalmology. Chicago.
American Journal of Psychiatry. New York.
American Journal of Roentgenol. and Radium Therapy. Springfield, Ill.
American Journal of Surgery. New York.
American Journal of Tropical Medicine and Hygiene. Baltimore.
American Review of Tuberculosis. New York.
American Surgeon. Baltimore.
Anales de la Facultad de medicina de Montevideo. Montevideo.
Anesthesiology. Philadelphia.
Angiology. Baltimore.
Annales chirurgiae et gynacologiae Fenniae. Helsinki.
Annales paediatrici. Basel.
Annals of Internal Medicine. Lancaster, Pa.
Annals of Surgery. Philadelphia.
Antibiotic Medicine. New York.
Archives of Disease in Childhood. London.
Archives françaises de pédiatrie. Paris.
Archivos del Instituto de cardiologia de México. México, D. F.
Archiv für klinische Chirurgie. Berlin.
Archiv für Kinderheilkunde. Stuttgart.
Archives des maladies de l'appareil digestif. Paris.
Archivio di ortopedia. Milan.
Archives of Pediatrics. New York.
Archivio di tisiologia e delle malattie dell'apparato respiratorio. Naples.
Archivum chirurgicum neerlandicum. Arnhem.
Arquivos dos Hospitais da Santa Casa de São Paulo. São Paulo.
Arizona Medicine. Phoenix, Arizona.
Ärztliche Wochenschrift. Berlin.
Australian & New Zealand Journal of Surgery. Melbourne.
Australasian Annals of Medicine. Sydney.
Beiträge zur klinischen Chirurgie. Munich.
Beiträge zur Klinik der Tuberkulose. Berlin.
Bibliotek for laeger. Copenhagen.
Bollettino della Societa italiana di cardiologia. Rome.
Blood. New York.
Boletin de la Asociación médica de Puerto Rico. Santurce.
Brain. London.
British Heart Journal. London.
British Journal of Cancer. London.
British Journal of Ophthalmology. London.
British Journal of Preventive and Social Medicine. London.
British Journal of Radiology. London.
British Journal of Surgery. Bristol.
British Journal of Tuberculosis and Diseases of the Chest. London.
British Journal of Urology. Edinburgh.
British Medical Journal. London.
Bulletin of the Johns Hopkins Hospital. Baltimore.
Bulletin of the Los Angeles Neurological Society. Los Angeles.
California Medicine. San Francisco.
Canadian Medical Association Journal. Montreal.
Cancer. Philadelphia.
Cardiologia. Basel.
Central African Journal of Medicine. Salisbury.
Chinese Medical Journal. Peking.
Chirurgia e patologia sperimentale. Milan.
Circulation. New York.
Circulation Research. New York.
Clinica pediatrica. Bologna.
Danish Medical Bulletin. Copenhagen.
Delaware State Medical Journal. Farnhurst, Del.
Deutsche medizinische Wochenschrift. Stuttgart.
Deutsche Zeitschrift für Nervenheilkunde. Berlin.
Diabetes. New York.
Die Medizinische. Stuttgart.
Diseases of the Chest. Chicago.
East African Medical Journal. Nairobi.
Eye, Ear, Nose & Throat Monthly. Chicago.
Fertility and Sterility. New York.
Gastroenterologia. Basel.
Gastroenterology. Baltimore.
Gazzetta medica italiana. Turin.
German Medical Monthly. Stuttgart.
Harefuah. Tel-Aviv.
Hawaii Medical Journal. Honolulu.
Helvetica paediatrica acta. Basel.
Illinois Medical Journal. Chicago.
Industrial Medicine and Surgery. Chicago.
Irish Journal of Medical Science. Dublin.
Journal of Allergy. St. Louis.
Journal of the American Geriatrics Society. Baltimore.
Journal of the American Medical Women's Association. New York.
Journal of Aviation Medicine. St. Paul.
Journal of Bone and Joint Surgery. Boston and London.
Journal of Chronic Diseases. St. Louis.
Journal of Clinical Endocrinology and Metabolism. Springfield, Ill.
Journal of Clinical Investigation. New York.
Journal of Forensic Medicine. Cape Town.
Journal of the Florida Medical Association. Jacksonville.
Journal of the Indiana State Medical Association. Indianapolis.
Journal of International College of Surgeons. Chicago.
Journal of Investigative Dermatology. Baltimore.
Journal of the Irish Medical Association. Dublin.
Journal of Kansas Medical Society. Topeka.
Journal of the Kentucky State Medical Association. Louisville.
Journal of Laboratory and Clinical Medicine. St. Louis.
Journal-Lancet. Minneapolis.
Journal of the Louisiana State Medical Society. New Orleans.
Journal of the Maine Medical Association. Brunswick.
Journal of the Medical Association of Georgia. Atlanta.
Journal of the Medical Association of the State of Alabama. Montgomery.
Journal of the Medical Society of New Jersey. Trenton.
Journal of Mental Science. London.
Journal of Michigan State Medical Society. St. Paul.
Journal of the Mount Sinai Hospital. New York.
Journal of the National Cancer Institute. Washington, D. C.
Journal of Neurology, Neurosurgery and Psychiatry. London.
Journal of Neuropathology and Experimental Neurology. New York.
Journal of Neurosurgery. Springfield, Ill.
Journal of Obstetrics and Gynaecology of the British Empire. London.
Journal of Pediatrics. St. Louis.
Journal of South Carolina Medical Association. Florence.
Journal of Thoracic Surgery. St. Louis.
Journal of Urology. Baltimore.
Khirurgiya. Moscow.
Kinderärztliche Praxis. Leipzig.
Klinische Medizin. Vienna.
Klinicheskaya meditsina. Moscow.
Krebsarzt. Vienna.
Lancet. London.
Lotta contro la tubercolosi. Rome.
Maryland State Medical Journal. Baltimore.
Medical Annals of the District of Columbia. Washington, D. C.
Medical Journal of Australia. Sydney.
Medicine. Baltimore.
Medicina clinica. Barcelona.
Minerva cardioangiologica. Turin.
Minerva ginecologica. Turin.
Minerva medica. Turin.
Minerva pediatrica. Turin.
Minnesota Medicine. St. Paul.
Missouri Medicine. St. Louis.
Monatsschrift für Kinderheilkunde. Berlin.
Münchener medizinische Wochenschrift. Munich.
Nebraska State Medical Journal. Lincoln.
Nederlandsch tidschrift voor geneeskunde. Haarlem.
Neurology. Minneapolis.
New England Journal of Medicine. Boston.
New York State Journal of Medicine. New York.
New Zealand Medical Journal. Wellington.
North Carolina Medical Journal. Winston-Salem.
Northwest Medicine. Seattle.
Obstetrics and Gynecology. New York.
Obstetricia y ginecologia latino-americanas. Buenos Aires.
Pediatria. Naples.
Pediatrics. Springfield, Ill.
Pennsylvania Medical Journal. Harrisburg.
Plastic & Reconstructive Surgery. Baltimore.
Policlinico (sezione chirurgica). Rome.
Policlinico (sezione medica). Rome.
Policlinico (sezione pratica). Rome.
Postgraduate Medical Journal. London.
Prensa médica argentina. Buenos Aires.
Presse médicale. Paris.
Proceedings of the Royal Society of Medicine. London.

Proceedings of Staff Meetings of Mayo Clinic. Rochester, Minn.
Public Health Reports. Washington, D. C.
Quarterly Journal of Medicine. Oxford.
Quarterly Journal of Studies on Alcohol. New Haven.
Radiology. Syracuse, N. Y.
Rassegna clinica terapia e scienze affini. Rome.
Revista brasileira de cirurgia. Rio de Janeiro.
Revista brasileira de tuberculose. Rio de Janeiro.
Revista clínica española. Madrid.
Revista cubana de pediatria. Havana.
Revista española de oto-neuro-oftalmologia y neurocirugía. Valencia.
Revista española de pediatria. Saragossa.
Revista de gynecologia e d'obstetricia. Rio de Janeiro.
Revista do Hospital das clinicas, Faculdade de medicina. São Paulo.
Revista médica de Chile. Santiago.
Revista Médica del Hospital General. México, D. F.
Revista paulista de medicina. São Paulo.
Revista peruana de cardiologia. Lima.
Revue française d'études cliniques et biologiques. Paris.
Revue de la tuberculose. Paris.
Rheumatism. London.
Riforma medica. Naples.
Schweizerische medizinische Wochenschrift. Basel.
Scientia medica italica. Rome.
Semaine des hôpitaux de Paris. Paris.
Semana médica. Buenos Aires.
Settimana medica. Florence.
South African Medical Journal. Cape Town.
Southern Medical Journal. Birmingham, Ala.
Surgery. St. Louis.
Surgery, Gynecology and Obstetrics. Chicago.
Terapeviticheskiy Arkhiv. Moscow.
Thorax. London.
Tidsskrift for den norske laegeforening. Oslo.
Tórax. Montevideo.
Transactions of the Royal Society of Tropical Medicine and Hygiene. London.
Transactions of the South Central Section of the American Urological Association. Kansas City.
Tubercle. London.
Tuberkulosearzt. Stuttgart.
Tumori. Milan.
Ugeskrift for laeger. Copenhagen.
United States Armed Forces Medical Journal. Washington, D. C.
Virginia Medical Monthly. Richmond.
Wiener Zeitschrift für innere Medizin und ihre Grenzgebiete. Vienna.
West Virginia Medical Journal. Charleston.
Western Journal of Surgery, Obstetrics and Gynecology. Portland, Ore.
Wisconsin Medical Journal. Madison.
Zeitschrift für Hygiene und Infektionskrankheiten. Berlin.
Zeitschrift für klinische Medizin. Berlin.
Zeitschrift für Kinderheilkunde. Berlin.
Zeitschrift für Urologie. Leipzig.

* Cannot be lent.

V 165
1957

SUBJECT INDEX

The letters used to explain in which department the matter indexed appears are as follows: "E," Editorial; "C," Correspondence; "ab," abstracts; the asterisk (*) indicates an original article in THE JOURNAL.

This is a subject index and one should, therefore, look for the subject word with the following exceptions: Foundations, Lectures, Moving Pictures, and Prizes, under "F," "L," "M," and "P" respectively. "Book Reviews," "Deaths," "Medicolegal Abstracts" and "Societies" are indexed under these titles at the end of the letters "B," "D," "M," and "S." Matter pertaining to the Association is indexed under "American Medical Association." The name of the author, in brackets, follows the subject entry.

For the author index see page 49.

A

ACTH: See Corticotropin
AD: **APC**: **ARD VIRUSES**: See Adenovirus
ABDOMEN
abnormalities, gastroschisis, [Kiesewetter] 758—ab
intra-abdominal complications after distal subtotal gastrectomy for gastroduodenal ulcerations, [Pearce] 2229—ab
muscles, wearing of girdles harmful to? 641
pain, diagnosis, pathogenesis and therapy, 2029
pain, paroxysmal, as manifestation of epilepsy, [O'Brien] 1879—ab
pain, recurrent in boy 8, epinephrine test of allergy, (reply) [Rosen] 1520
surgery, find primary appendix cancer during, [Rabinovitch] 746—ab
surgery, need drinking postoperatively? 1770
surgery, transabdominal biopsies of os coxae tumors during laparotomy condemned, [Lewis & Bickel] *8
trauma, blood studies in differential diagnosis, [Berman & others] *1537
ABEL, JOHN JACOB (1857-1938)
centennial commemorated, 255-E
ABNORMALITIES
congenital, in infants after mumps during pregnancy, [Holowach] 299—ab
constitutional stigmata and anomalous inclusions in leukocytes in Chédiak-Higashi syndrome, [Donohue] 2014—ab
frequency in infants after maternal rubella, [Greenberg & others] *675; 688-E
prevention, alpha tocopherol as prophylactic measure, [Shute] 634—ab
ABORTION
etiologic relationship to radioactive iodine therapy, 2244
missed, likelihood or incidence of afibrinogenemia occurring in, 1893
mortality from, United Kingdom, 627
therapeutic, endometriosis in vaginal scar after hysterotomy for, [Gottlieb] 192—ab
threatened, vaginal smear to detect cytology changes in, India, 179
ABRASION, Therapeutic: See Planing
ABSCESS
brain, in congenital heart disease, [Gund] 1190—ab
breast, in puerperium, problem of, [Sarason] 1335—ab
cerebral, electroencephalogram in, Brazil, 386
lung, changing picture of therapy, [Wolcott] 1193—ab
ACANTHROCYTOSIS
retinitis pigmentosa and heredodegenerative neuromuscular disease with, [Kornzweig] 1642—ab
ACCIDENTS
Automobile: See Automobiles
burden on hospitals, 838-E; (Bureau article) 816
childhood, prevention, [Jacobziner] 299—ab
electric shock, atrial fibrillation due to, [Wehrmacher] *349
electrocution, India, 1621
in preschool children, 1607
in U. S., Health Information Foundation statistics, 1720
Industrial: See Industrial Accidents
medicine's "happy accidents," serendipity, 2088—E
ACETAZOLAMIDE
toxicity: acute transient myopia, [Binder & Steele] *154
treatment during pregnancy, effect on fetus, 1517
treatment of edema of pregnancy, [Balthrop] 405—ab
treatment of glaucoma, (use and misuse) [Chandler] 106—ab; (propanyl derivative) [Ballstocky] 107—ab
treatment of sickle-cell anemia, United Kingdom, 274; [Hilkovitz] 1889—ab
ACETRIZOATE, SODIUM
for angiocardiography in diagnosis of pulmonary disease, [Lyons] *1939
ACETYLSALICYLIC ACID (Aspirin)
corticosteroids combined, United Kingdom, 873
toxicity, acute, hemodialysis in, [Dalgard] 1754—ab
ACETYLSALICYLIC ACID—Continued
treatment of degenerative joint disease, [Williams] 1755—ab
ACHALASIA
etiology, pathogenesis, treatment, Spain, 2107
ACHROMYCIN: See Tetracycline
ACID: See under name of specific acid as Acetylsalicylic Acid
ACID-BASE EQUILIBRIUM
of respirator poliomyelitis patients, [Droese] 190—ab
ACNE
asthma, and attitude, 1152—E
premenstrual, treatment, (replies) [Wiener; and original consultant] 316; [Sutton] 2245
treatment, penicillin for 6 months, hazards of, 1359
ACRANIL
treatment of giardiasis, dosage, (reply) [Berberian] 1090
ACRO-OSTEOLYSIS
of extremities, and familial ulcers, mutilating lesions, [Bogaert] 2006—ab
ACTHAR: See Corticotropin
ACTIVITY
early, psychiatric aspects of care of severely injured, [Kottke] *1930
ADAMS—Stokes Syndrome: See Heart, block
ADDISON'S DISEASE
nature of pigmentary disturbances in, [Hudson] 1185—ab
ADENOCARCINOMA
of breast in woman 24, procedures after radical mastectomy, 763
of uterus, India, 273
prostatatic, medullary type, [Weller] 893—ab
ADENOIDAL-PHARYNGEAL-CONJUNCTIVAL VIRUS: See Adenovirus
ADENOLYMPHOMA
of parotid region, [Vikari] 1756—ab
ADENOMA
bronchial, [Fraser] 882—ab
bronchial, resection for, [Overholt] 746—ab
pancreatic islet adenomatosis, United Kingdom, 1992
pancreatic, metastasizing, with exocrine secretion, [Schmid] 900—ab
pulmonary adenomatosis, [Purriel] 741—ab
solitary, malignancy of, [Keminger] 747—ab
ADENOVIRUS (AD: APC: ARD: RI)
clinical and epidemiologic research in Italy, [Turcio] 2067—ab
conjunctivitis, Canada, 1619
eye infections, United Kingdom, 1737
respiratory, in volunteers after intramuscular administration of virus, [Hilleman] 1755—ab
types 3, 7 and 14, pharyngo-conjunctival fever with, [Kendall] 1498—ab
ADOLESCENCE
dermatomycosis in, [Everett] 1080—ab
health services in, new approach, [Jacobziner] *1669
sex behavior and venereal disease in teenagers, pilot study, Mo., 1158
ADRENALIN: See Epinephrine
ADRENALS: See also Addison's Disease; Cushing's Syndrome
adrenogenital syndrome, screening for, 1514
cancer of cortex without endocrine effects, [Wood] 2231—ab
cortex, role in liver disease, India, 1071
cortical function evaluated with intramuscular ACTH gel, [DeFilippis] 1085—ab
cortical insufficiency, acute postoperative, [Adams & Siderius] *41
cortical insufficiency, treatment, [Nabarro] 1345—ab
cortical response in surgery, [Lefemine] 1328—ab
cortical response, maintain by intermittent repository ACTH during prolonged corticoids, [Young] 1208—ab
excision, electrolyte response after, N. Z., 2216
excision, fludrocortisone and cortisone after, N. Z., 180
excision for metastatic breast cancer, [Dao & Huggins] *1793
hyperfunction, screening for, 1514
insufficiency after cortisone, postoperative collapse from, [Slaney] 749—ab
ADRENALS—Continued
lesions in meningococcemia, [Thomison] 196—ab
resection and sympathectomy, improvement in hypertensive retinopathy after, [Frayer] 2235—ab
tumors, atrophy in Cushing's syndrome due to, [Kyle] 1344—ab
tumors, cortical, functioning and nonfunctioning, [Heinbecker] 749—ab
tumors, neuroblastoma, ocular metastases in Hutchison-Pepper syndrome, [Das Gupta] 409—ab
ADRENOCORTICOTROPIC HORMONE: See Corticotropin
ADYNAMIA
episodic, hereditary, familial paralysis with hyperkalemia, [Kaplan] 1331—ab
AEROLONE: See Isoproterenol
AEROSPORIN: See Polymyxin B Sulfate
AEROTITIS: See Otitis Media
AFIBRINOGENEMIA: See Blood fibrinogen
AGAMMAGLOBULINEMIA: See Gamma Globulin
AGE
college, population trend in U. S., 1402
influence on susceptibility and manifestations in poliomyelitis, [Weinstein] 885—ab
optimum, for mass BCG vaccination, [Pollock] 1760—ab
pregnancy and, possibility at 20 and 30, 2244
AGING: See Old Age
AGRICULTURE
looks to the future, (Miscellany) [Shuman] *1626
AIR
conditioning, central, in hospital, hazards of air-borne infections, 1359
encephalography, subdural hematoma after, [Robinson] 292—ab
Pollution: See Smog
AIR FORCE: See Aviation, U. S. Air Force
AIRPLANES: See Aviation
ALBAMYCIN: See Novobiocin
ALBUMINURIA
ACTH for nephotic syndrome effect on, [Mateer] 194—ab
diagnosis, one-drop method, [Knights & Jablokow] *1277
sensitive test of change in nephrotic syndrome after steroids, [Goodman & Baxter] *1798
ALCOHOL
congress, France, 377
hazard in myocardial infarction, 114
in Blood: See Blood
paravertebral block of lumbar sympathetic nerves, sweating tests after, [Roedling & others] *799
prescribing gin, United Kingdom, 1857
static atactic functional disorders caused by, [Pihkaven] 293—ab
ALCOHOLISM: See also "Drunkenness" under Medicolegal Abstracts at end of letter M
acute, terminal blood alcohol in fatal cases, [Kaye & Haag] *151
A. M. A. Committee annual report on, 994
cirrhosis in, delta-cortisone for, [Cachin]: (ascites complicating) [Fraisse] 1086—ab
corticosteroids for delirium tremens, Sweden, 1624
definition: symptoms and signs, 312
in automobile accidents, Sweden, 626
mock trial, chemical tests for intoxication, 984; 986
treatment, Denmark, 624
ALDEHYDES
effect of possible smog irritants, [Sim & Pattle] *1908
treatment, Temposil, (United Kingdom) 1857; (for chronic type) [Smith & others] *2181
ALDINAMIDE: See Pyrazinamide
ALDOSTERONE
vs. potassium postoperatively, N. Z., 2216
ALDOSTERONISM
postoperative transient, [Llaurado] 1323—ab
primary, [Milne] 1329—ab
ALFLORONE: See Fludrocortisone
ALIDASE: See Hyaluronidase
ALLERGY
American Foundation for Allergic Diseases, postdoctoral fellowships, 616
amlnophylline, [Soifer] 298—ab

ALLERGY—Continued
carbutamide, fatal, [Field] 412—ab
coal-tar sensitivity, analgesics and antipyretics which do not contain? 2031
cold hypersensitivity, 1515
dermatitis from boron gasoline, 1356
dermatitis from shoes, differential diagnosis of cause, 641
dermatoses from, [Rostenberg] *1118
diagnosis, epinephrine test in boy with recurrent abdominal pain, (reply) [Rosen] 1520
drug reactions, enzymes, and biochemical genetics, (Council article) [Motulsky] *835
etiology, Spain, 2107
food, skin tests in children with asthma, (reply) [Engelsher] 120
formaldehyde dermatitis from Celeron, 642
headache due to? 422
histamine fixation, Austria, 2104
hydralazine syndrome: hypersensitivity or toxicity? [Reynolds & Caldwell] *1823
in childhood, psychosomatic aspects of, [Rapaport] *812
in children: corticosteroids for, duration, effects on adrenals, 311
insulin, indication for tolbutamide, (reply) [Engelsher] 278—C
meprobamate, Israel, 625
milk, diagnostic aspects and role of substitutes, [Fries] *1512
novobiocin, incidence, 641
penicillin, acute immediate reactions, [Lewis] 107—ab
penicillin, fatal, evaluate test for sensitivity, [Smith] 2127—ab
penicillin, penicillinase for, [Minno & Davis] *222
penicillin, rheumatic fever prophylaxis in presence of, 423
penicillin, treat neurosyphilis in presence of, 912
polyarthritis, fever, and lymphadenopathy in young man, (Diagnostic Problems) [Kushner & Szanto] *1690
printer's ink, desensitization possible? 1768
probenecid-penicillin, mucocutaneous reactions, [Ström] 1510—ab
procaine, treatment, 111: (reply) [Shure] 1090
residency at Montefiore and Medical Center Hospitals, Pa., 1159
silk, severe reactions to biologicals caused by, [Brown & Coleman] *2178
snake venom (North American) sensitivity, survey of, [Parrish] 2020—ab
specific hyposensitization as long term treatment of asthma, [Bruun] 1210—ab
"spots" before eyes caused by? 422
to antitetanic serum in meningococcic meningitis, [Corsini] 2233—ab
to donor leukocytes and platelets, febrile transfusion reactions from, [Brittingham & Chaplin] *819
to light, diagnosis and treatment, 1895
treatment, ACTH and steroids status, [Bookman] *1950
treatment, methylprednisolone, [Feinberg & others] *1569
treatment, prednisone and prednisolone, [Bukantz & Aubuchon] *1256
tuna fish, possible in infant 2 days after eating? 198
N-ALLYLNORMORPHINE: See Nalorphine
ALOPECIA
from ether? 765
ALSEROXYLON: See Rauwolfia serpentina
ALUDRINE: See Isoproterenol
AMEBIASIS
central serous choroidosis with, [Braley] 634—ab
chronic, oxytetracycline and tetracycline for, [Ruiz Sánchez] 2020—ab
diagnosis, complement fixation test in, [Spicknall] 738—ab
hepatic, Brazil, 178
hepatic, with old myocardial infarction, emetine contraindicated? 1225
in children, India, 867
pulmonary, unusual disease with, Austria, 84
prophylaxis for travelers, (reply) [Kean] 1518
treatment, Camoform, [Bustamente y Rivero] *829
AMERICAN: See also list of Societies and Other Organizations at end of letter S
Association of Medical Assistants, A. M. A. organizational manual introduced at convention, 256
Bar Association cooperation with A. M. A. on medical-legal problems, [Medicine and the Law] *699
Congress of Medical Students, first, held in Peru in August, 1622
Heart Association, disorders of heart beat, [Illustrated Film Reviews] *2112
Hospital Association, Joint Committee on Health Program for Hospital Personnel, annual report, 1006
Medical Directory, shipping Sept. 1958, 1832
Medical Education Foundation: See Foundations
AMERICAN—Continued
Society of Pharmacology and Experimental Therapeutics commemorated John Jacob Abel's centennial, 255—E
Specialty Boards, (requirements for certification) 453; 573; (changes in radiology certification) [Childs] *1545
students studying medicine abroad, 1431
AMERICAN MEDICAL ASSOCIATION
administrative changes, Heller report—Hyland committee, action at Philadelphia, 2091
American Medical Education Foundation: See Foundations
American Medical Research Foundation established by, 256; 1705
Annual and Clinical Meetings, places and dates, 977
Annual Congress on Medical Education and Licensure, (annual report on) 1027; (53rd, summary) 1398; (54th, program) 1962
Annual Reports, October 26, p. 976
Board of Trustees, (death of Dr. John Harold Fitzgibbon, photo) 620; (annual report) 977
Bureau of Exhibits, new exhibits, 1962
Bureau of Health Education, (activities in fitness of American youth program, President's Page) 1855; (radio transcriptions on winter fun) 1832
Bureau of Investigation: Bimini fué descubierto; is "Pega Palo" the answer? 693
Committee on Aging, regional meeting, 1156
Committee on Aging series on aspects of Aging: See Old Age
Committee on Aviation, new, under Council on Industrial Health, 56
Committee on Cosmetics cosponsors symposium on human integument, 1705
Committee on Legislation, annual report, 986
Committee on Maternal and Child Care, regional meeting, 1156
Committee on Medical Rating of Physical Impairment, social security disability program, 354
Committee on medicolegal problems, annual report, 985
Committee on Toxicology recommendations on first-aid measures for poisoning, (Council report) *686
Committees for Review of Medicolegal Testimony, [Medicine and the Law] *703
conference on aging, plans, 1570
conference on television and radio cosponsored by, 56; 1056
convention drug samples, 1459—E
cooperation with Nutrition Foundations, 1000
Council on Drugs, (change in operation: list preparations with monographs on drugs) 155; (role in drug control) [Dowling] *657; 688—E
Council on Foods and Nutrition, (symposium on nutrition in pregnancy, Oct. 11, program) 49; 57—E; 604—E; (reprint requests from New York meeting lost) 375
Council on Industrial Health, (sponsors Industrial Health Congress in Milwaukee) 841; 1832; (Committee on Aviation under) 56; (cosponsors session on vision at National Safety Congress) 354; (health programs for hospital employees) 1705
Council on Medical Education and Hospitals, (background and development of Residency Review and Conference Committee) 60; (approved internships and residencies) 453; 602—E; (report on Council for Foreign Medical Graduates) 1706; (annual medical education report) 1393; (program of annual congress on medical education and licensure) 1962
Council on Medical Service, (regional committee meetings) 1156; (home care programs available from) 1283; (selected proceedings of Association of Life Insurance Medical Directors of America) 1574; (1957 survey of county medical societies available from) 1962
Council on Medical Service series on aspects of aging: See Old Age
Council on Mental Health, reports on narcotic addiction, *1707; *1834; *1968
Council on National Defense, (report on Armed Forces Program for residency deferment) 607; (sponsor County Medical Societies Civil Defense Conference, program) 841
Council on Rural Health, rural health study conference sponsored by, 57
Distinguished Service Award, 977
FCDA research and study project, annual report on, 1012
film shipments increased, 1962
films added to Motion Picture Library, 1492; 1741
fluoroscopy shoe fitting, discontinuance advocated, (Council report) 1705
General Manager, Dr. F. J. L. Blasingame honored for his appointment as, (photo) 1056
AMERICAN MEDICAL ASSOCIATION—Continued
General Practitioner's award, (deadline for biographies) 1057; (award to Dr. Cecil W. Clark, photo) 2089—E; (photo) 2200
Grants-in-Aid, annual report on, 1002
House of Delegates, (members) 959; (meetings) 962
JOURNAL index available, 2203
journals, circulation, 978
Judicial Council, (appeals alleging discrimination against medical society memberships, fees and local judicial matters) 839; (annual report) 1024
Law Department, (prepares liability kits) 356; (professional liability study) [Medicine and the Law] *701
membership, 976
Mental Health session report, 1961
New York Annual Meeting, report on, 1013
Officers, (list of) 961; (reports) 976
organizational manual for medical assistants, 256
periodic publication on health, report on, 977
Philadelphia Clinical Meeting, (preliminary plans) 690—E; 810; 1570; (program) 959; (highlights) 2090; (photos) 2200-2202; (registration) 2203
policy on mass immunizations, 202
policy on social security for physicians, President Allman replies to A. M. A. member opposing A. M. A. stand, 2199
policy on water fluoridation, 2090
position on shelter program, request for, 1011
President's Page, (monthly message) 353; 1055; 1701; 2199
Principles of Medical Ethics: See Ethics, Medical
Public Relations Institute, report, (photo) 1057
publication on medicolegal forms with legal analysis, 1832
publication: Veterans and Nonveterans: Two Classes of Citizens? 2092
QUARTERLY CUMULATIVE INDEX MEDICUS, Volume 57, 1955, available, 1705
recommends that medical department be established in Civil Aeronautics Administration, 2093
Reference Committee on Hygiene, Public Health and Industrial Health, report on narcotic addiction, *1973
Reference Committees of House of Delegates, 960
registration, Philadelphia Clinical Meeting, 962; 2203
related activities of organized medicine, [Medicine and the Law] *702
Reports of Officers, October 26, p. 976
San Francisco meeting, (hotel reservations for) 57; (plans, Section Secretaries and Exhibit representatives) 1155
Scientific Exhibit, Philadelphia meeting, 969
Scientific Program, Philadelphia meeting, 964
Seattle Clinical Meeting, report on, 1013
Secretary, report, 976
Section on Anesthesiology, story of, (Chairman's address) [Smith] *939
Section on Experimental Medicine and Therapeutics, (Chairman's address) [Dowling] *657; 688—E
Section on General Practice, (Chairman's address) [Thorpe] *1361
Section on Internal Medicine, (Chairman's address) [Ernstene] *1110; 1152—E
Section on Laryngology, Otology, and Rhinology, (Chairman's address) [Hoople] *232; (Honorary Chairman's address) [Lempert] *229
Section on Military Medicine, (Chairman's address) [Lee] *805
Section on Nervous and Mental Diseases, (Chairman's address) [von Hagen] *773
Section on Obstetrics and Gynecology, (Chairman's address) [Kaltreider] *132
Section on Orthopedic Surgery, (Chairman's address) [Compere] *2070
Section on Pediatrics, (Chairman's address) [Peterman] *2161
Section on Physical Medicine and Rehabilitation, (Chairman's address) [Newman] *1547
Section on Preventive Medicine, (Chairman's address) [Tracy] *2413
Section on Radiology, (Chairman's address) [Childs] *1545
Special Committee on Influenza, reports on Asian influenza, 53—E; 58; 59; 166; 352—E; 356; 689—E; 691
task force to study law on hospitalization of aged financed by Social Security funds, 841; 1283; (President's page) 1701
Technical Exposition, Philadelphia Clinical Meeting, 1053
TODAY'S HEALTH, James M. Liston appointed chief editor, 841
Washington Office, annual report on, 989
Woman's Auxiliary: See Woman's Auxiliary
d-AMFETASUL: See Dextro Amphetamine Sulfate

V 16
1957

AMINO ACIDS: See also specific acids as Phenylalanine
of brain and cerebrospinal fluid increased, coma with, in dogs with Eck's fistula, [Bollman] 1878—ab
AMINOACIDURIA
glycinuria, hereditary disorder associated with nephrolithiasis, [De Vries] 2234—ab
in erythroblastosis fetalis, possible relation to **kernicterus**, [Nestel] 1507—ab
in **Fanconi's syndrome**, [Astrup] 285—ab
renal clearance of lysine in cystinuria, [Doolan] 2222—ab
AMINOPHERASE: See Transaminase
AMINOPHYLLINE
toxicity, [Soiffer] 298—ab
AMINOSALICYLIC ACID (PAS)
toxicity combined with dihydrostreptomycin and isoniazid in tuberculosis: eczema, [Crissey & others] *1526
treatment alternated with isoniazid in tuberculosis of lung, [Reale] 1316—ab
treatment plus isoniazid in laryngeal tuberculosis, [Wallner] 895—ab
treatment plus streptomycinpantothenate intravenously in tuberculosis, [Kuntz] 1346—ab
AMISOMETRADINE
N. N. D., 155
AMMONIA: See also Blood ammonia
in etiology of diaper rash, 254—E
irritant effects of acid in smog abolished by, [Sim & Pattle] *1908
AMNION
induced rupture and latent period before labor, what is safe time? 2141
AMNIOTIC FLUID
demonstrate Toxoplasma in, [Schmidtke] 2014—ab
AMPHENONE
sodium diuresis from, in cirrhosis and ascites, [Wolff] 1644—ab
AMPHIBIOUS Medicine, 1449
AMPUTATION
right arm amputee: Karoly Takacs, Olympic champion pistol shooter, [Jokl] *1129
AMYLOIDOSIS
congo-red test for, interval between tests, 1355
ANALEPTIC DRUGS
in rehabilitation of mental illness, [Ferguson] *1677
ANALGESICS
evaluation, Canada, 1172
for pain, 427
obstetric, in general practice, [Bonica] *2146
R 875, habit-forming drug, (reply) [Eddy] 91—C
which do not contain coal tar for use in coal-tar sensitivity, 2031
ANAMNESIS
in patients with bronchial carcinoma, [Feiks] 1496—ab
ANAPHYLAXIS: See Allergy
ANCYLOSTOMIASIS
treatment, dithiazanine, effective, [Swartzwelder & others] *2063
ANDROGENS
treatment of metastasized breast carcinoma, calciuria as indicator of efficacy, [Gerbrandy] 1500—ab
ANECTINE: See Succinylcholine
ANEMIA
Aplastic: See also Fanconi's Syndrome
aplastic, from chloramphenicol, [Madsen] 304—ab
blood iron changes in, India, 1621
Cooley's: See Leptocytosis, hereditary
differential diagnosis, radioisotopes in, [Hudes] 736—ab
hemolytic, due to autoantibodies, prednisone and splenectomy for, [Cantoni] 1746—ab
hypophysial and diencephalic origin, [Leprat] 184—ab
in male, etiology, treatment, 2244
macrocytic, differentiation by hepatic uptake of radioactive $Co^{60}B_{12}$, [Glass] 1870—ab
Mediterranean: See Leptocytosis, hereditary
megaloblastic, Davidson's, [Georgescu] 879—**ab**
megaloblastic, incidence after subtotal gastrectomy, [MacLean] 1501—ab
megaloblastic, of pregnancy, folinic acid in, [Scott] 1881—ab
neonatal, from fetal hemorrhage into maternal circulation, [Gunson] 1199—ab
of prematurity, therapy, [Pototschnig] 391—ab
sickle-cell, new treatment, United Kingdom, 274; [Hilkovitz] 1889—ab
unreliability of clinical assessment of, United Kingdom, 1992
ANEMIA, PERNICIOUS
diagnosis, radioactively labeled vitamin B_{12} in, [Smythe] 2223—ab
ethnologic aspects of **ABO** blood groups in, [Buckwalter & others] *327

ANEMIA, PERNICIOUS—Continued
in remission, diagnosis by hepatic uptake of radioactive $Co^{60}B_{12}$, [Glass] 1870—ab
uropepsin excretion in, [Corazza & Myerson] *146
ANENCEPHALY
hereditary aspects, 2 monsters with, born to woman with 2 normal children, 311
ANESTHESIA
alopecia from ether? 765
endotracheal tube, modifications, [Cole] *149
fluothane, (symposium on, Canada) 624; (U. K.) 1175; (use in closed circuit) [Marrett] 2135—ab
for open heart surgery, [Keown & others] *781
for thoracic surgery, Brazil, 1730
for tonsillectomy after removal of pheochromocytoma, 1225
general orotracheal, for bronchoscopy, [Reitman] *943
obstetric, in general practice, [Bonica] *2146
obstetric, regional and general compared, cyclopropane transmission across placenta, [Apgar & others] *2155; 2198—E
obstetric, regional, preferred for tuberculous patient, [Schaefer & others] *2163
precanesthetic use of atropine and scopolamine in glaucoma, [Schwartz & others] *114
premedication for tonsillectomy in children, 201
research, United Kingdom, 276
retrosternal novocaine for coronary insufficiency, [Ostapiuk] 628—ab
spinal, sterilization of ampuls for, 2032
spinal, supplemented with intravenous thiopental sodium and/or nitrous oxide, hazard of, 1896
succinylcholine drip in cesarean section, [Kolstad] 192—ab
ANESTHESIOLOGY
story of A. M. A. Section on, [Smith] *939
ANEURYSM
abdominal, orlon and nylon prostheses: experimental aortic homografts, [Hardin] 1326—ab
atherosclerotic, arteriograms in, [Eiseman] 291—ab
coronary, [Gilbert] 305—ab
dissecting aortic, [Lyons] 1874—ab
intracranial, of renal artery, [Smith] 894—ab
popliteal, paravertebral alcohol block of lumbar sympathetic nerves in, [Roedling & others] *799
pseudoaneurysm of left ventricle, diagnosis, [Smith] 2226—ab
renal, 12 cases, 2 treated by excision and repair, [Poutasse] 196—ab
ruptured, of sinus of Valsalva, surgical treatment, [Lillehei] 2228—ab
ANGINA: See also Herpangina
abdominis, diagnosis, pathogenesis and therapy, 2029
ANGINA PECTORIS
ligation of internal mammary arteries for, [De Matteis] 747—ab; 914
symptoms and mortality, permanent anticoagulant therapy effect on, [Waaler] 735—ab
syndrome of relief of, after myocardial infarction, [Matis] 395—ab
treatment, anticoagulants, Brazil, 1731
ANGIOCARDIOGRAPHY: See Cardiovascular System, roentgen study
ANGIOGRAPHY: See Arteries: Blood Vessels, roentgen study
ANGIOID streaks and general arterial disease, [Scheie] 297—ab
ANGIOMATOSIS
meningofacial, histopathology, [Wohlwill] 1196—ab
ANGIOMYXOMA
of left atrium, [Protheroe] 2131—ab
ANGIOSARCOMA
primary, of heart, Kaposi's type, [Contreras] 2131—ab
ANHIDROSIS: See Sweat
ANILERIDINE
as analgesic, 428
ANIMAL EXPERIMENTATION
defense of research activities, antivivisectionists, annual report on, 1017
ANIMALS: See also Cattle; Dogs; Monkeys
diseases and human health conference, N. Y., 170
field hamster as source of swamp or field fever, [Mochmann] 308—ab
rabies in, decrease, N. Y., 1603
ANKYLOSIS: See Spine
ANOMALIES: See Abnormalities; under names of specific organs as Heart
ANOREXIA: See Appetite
ANOXIA: See Oxygen deficiency
ANSOLYSEN: See Pentolinium Tartrate
ANTABUSE: See Disulfiram
ANTEPAR: See Piperazine Citrate

ANTIBACTERIALS: See also Antibiotics; Chemotherapy; and under specific drugs
treatment alternated with isoniazid in tuberculosis of lung, [Reale] 1316—ab
treatment plus cortisone in Klebsiella pneumonia meningitis, [Sterkel] 740—ab
ANTIBIOTICS: See also under specific names as Penicillin
availability, changing status of virological diagnosis, [Cheever] *2059
change and sensibility of various strains of Staphylococcus aureus to, [D'Agata] 1887—ab
colon surgery and, [Cohn] 2230—ab
combinations: tetracycline with erythromycin, oleandomycin, and spiramycin; in vitro and antibacterial action of blood after, [Jones] 2237—ab
effect on purulent sputum in chronic bronchitis and bronchiectasis, [Douglas] 1633—ab
enterococci and hemolytic streptococci susceptibility to 5 new ones, [Jones] 414—ab
in virus diseases, 53—E
influenced course of tuberculosis of lung to what extent in children? [Piechaud] 889—ab
influenza and, 53—E; (Special Committee report) 58
misuse, United Kingdom, 874
role in status and development of combination of diabetes and tuberculosis, [Mattei] 734—ab
synergism of 12 against strains of Staphylococcus aureus, [Elliott] 1886
toxicity: asthma, [Jacquelin] 1643—ab
toxicity: fatal fulminating necrotic colitis, (Brazil) 386; [Nador] 1343—ab
toxicity: staphylococcic enteritis, [Bassi] 398—ab
treatment of increased blood sedimentation in healthy person? 642
treatment of infections from anaerobic bacteria, [de Lavergne] 898—ab
treatment of osseous tuberculosis, aspects of tubercle bacillus in, [Duriez] 1328—ab
treatment of regional enteritis, [Bargen] *2045
treatment plus cortisone in infantile primary tuberculosis, [Del Principe] 298—ab
treatment plus cortisone in influenza, Chile, 1620
treatment plus cortisone in resistant pelvic infections, [Hurtig] 191—ab
treatment, prolonged in severe bronchiectasis, [Medical Research Council] 1889—ab
vitamin C potentiate? 642
ANTIBODIES
antigen relationship in allergic dermatoses, [Rostenberg] *1118
hemolytic anemia due to autoantibodies, prednisone and splenectomy for, [Cantoni] 1746—ab
Poliomyelitis: See under Poliomyelitis
ANTICHOLINERGIC DRUGS
treatment of infantile nocturnal enuresis, [Bertolotto] 2236—ab
ANTICOAGULANTS: See also under specific anticoagulants, as Warfarin
treatment after cerebral thrombosis, control and duration, 116
treatment, Brazil, 1731
treatment, long term, [Olwin] 897—ab
treatment of acute myocardial infarction, [Eastman] 303—ab; [Armas Cruz] 897—ab; (prognostic factors) [Chieffo] 733—ab
treatment of thromboembolism, 3 evaluated, [Neilson] 186—ab
treatment (permanent) in angina pectoris, effect on symptoms and mortality, [Waaler] 735—ab
ANTIDIURETICS
piperoxan hydrochloride, antidiuresis during normotensive phase in pheochromocytoma, [Masson & others] *1555
ANTIGENS
antibody relationship in allergic dermatoses, [Rostenberg] *1118
test for brucellosis, 424
ANTISEPTICS
phenylmercuric acetate for laundering diapers, 254—E; (correction) 1163
ANTISTREPTOLYSIN
value in diagnosis of rheumatic disease, [Bertoni] 1187—ab
ANUS
imperforate, transportation of newborn infants for surgery of, [Bishop] *1230
melanoma, malignant, [Cristiani] 883—ab
AORTA
aorticopulmonary septal defect, diagnosis, surgical treatment, [Cooley] 1082—ab
arteriosclerosis and syphilis, anatomic and roentgen changes in, [Lodwick] 1759—ab
catheterization, technique and complications, [Soulié] 2116—ab
changes in malnutrition, India, 274
coarctation in infants, clinical and pathological observations, [Goldring] 1203—ab
coarctation, paradoxical hypertension after resection of, [Scaly] 1081—ab

AORTA—Continued
disease, temporary extracorporeal circulation in surgery for, [Cooley] 630—ab
experimental homografts, [Hardin] 1326—ab
grafts, comparative experimental study, [Shumacker] 102—ab
grafts, plastic, [Schumacker] 1873—ab
occlusion, value of hypothermia during, [Grosskreutz & others] *949
Roentgen Study: See also "Malpractice, aortogram" under Medicolegal Abstracts at end of letter M
roentgen study (abdominal), complications, [McAffe] 306—ab
roentgen study, acute renal failure after, [Roy] 1349—ab
roentgen study in urology, Austria, **164**:1000, June 29, 1957; (correction) **165**:1846, Dec. 7, 1957
roentgen study, indications for, in renal hypertension, [Poutasse & Dustan] *1521
roentgen study, translumbar, chylothorax after, [Gaspar] 2025—ab
transposition of pulmonary artery and, with pulmonary stenosis, [Cleland] 1337—ab
AORTIC ARCH
anomaly, pulse absent in both upper extremities due to, [Azevedo] 1315—ab
syndromes, [Burstein] 876—ab
AORTIC VALVE
insufficiency, severe, unusual clinical features, [Harvey] 1195—ab
stenosis in young persons, [Sørensen] 193—ab
stenosis, surgery for, [Bailey] 400—ab; [Keown & others] *781
stenosis with polycystic kidney, excision of kidney reduce cardiac demand? 202
AORTOGRAM: See Aorta, roentgen study; "Malpractice, aortogram" under Medicolegal Abstracts at end of letter M
APNEA
after neomycin, neostigmine for, [Middleton & others] *2186
APPARATUS
electromechanical arm slings, [Hoerner & others] *150
for determination of vital capacity and maximal breathing capacity, [Worton & Bedell] *1652
grasping hot cautery electrode to destroy rectal polyps, [Blaisdell] *1392
hepatojugulorameter, [Burch] *1274
hydraulic device to control injection during carotid angiography, [Epstein & Epstein] *679
APPENDICITIS
surgical complication of pregnancy, [Barter & Rovner] *317
APPENDIX
cancer, primary, incidental finding during laparatomy, [Rabinovitch] 746—ab
APPETITE
anorexiant for obesity: phenmetrazine hydrochloride, [Ressler] *135
stimulation, erythema and salivation after, 313
APRESOLINE: See Hydralazine
ARACHNODACTYLY
Marfan's syndrome, description of a family, [Wilson] 2224—ab
Marfan's syndrome with unusual blood vessel manifestations, [Austin] 1756—ab
ARALEN: See Chloroquine
ARCUS SENILIS
in young persons, prognosis, 204
ARGENTAFFINOMA: See Carcinoid
ARISTOCORT: See Triamcinolone Diacetate
ARMAZIDE: See Isoniazid
ARMED FORCES
change in physician-troop ratio, 1010
Dependents, Medical Care for: See Medicare
Epidemiological Board, Commission on Influenza, Asian influenza vaccination, *2055
Japanese brides to live in U. S., 1072
legislation to elevate rank of surgeons general, 1010
residency deferment program, (Council report) 607
studies of survival in miliary and meningeal tuberculosis, [Williams] 2235—ab
U. S. servicemen to be vaccinated against Asian influenza, United Kingdom, 390
ARMS: See also Extremities
slings, electromechanical, [Hoerner & others] *150
ARMY, UNITED STATES
Medical Department in World War II: history of history book series, [Coates] *241
medical officers, nuclear training for, 1847
medical procurement program, 1444
student dietitian program, 173
wings for medical officers, 77
ARRHYTHMIA: See also Atrial Fibrillation; Tachycardia; Ventricular Fibrillation
extrasystolic, cause, treatment, 1358
ARSENIC
less, in tobacco, United Kingdom, 2218
ARTERENOL (Nor-Epinephrine)
intravenously, tissue necrosis from, [de Alvarez] 1878—ab
sloughs, prevention of, [Bryant] 1210—ab
urinary, in differential diagnosis of essential hypertension and pheochromocytoma, [Henry] 1869—ab
L-ARTERENOL: See Levarterenol
ARTERIES
aging of, in relation to hypertension, [Conway] 732—ab
Aneurysm: See Aneurysm
bed of lung in pulmonary hypertension, [Short] 1347—ab
carotid and innominate, resection and homograft replacement, shunt to maintain circulation, [De Bakey] 1499—ab
carotid internal occlusion, surgical treatment, [Lyons] 1325—ab
carotid internal, surgery for thrombosis of, [Rob] 1638—ab
carotid, metatraumatic ligation, cerebral damage after, [Venziaff] 100—ab
carotid occlusion, ophthalmodynamometry to diagnose, [Wood & Toole] *1264
Coronary: See also Angina Pectoris; Arteriosclerosis; Thrombosis, coronary
coronary disease, A. M. A. symposium on cardiology, (graphic and laboratory diagnosis) [Master] *1771; (Master 2-step test in) [Russek] *1772; (significance of early T wave changes) [Burch] *1781; (vectocardiographic diagnosis) [Wolff] *1784
coronary disease, Beck operation for, [Beck] 630—ab
coronary disease, familial, prediction and prevention, 2140
coronary disease, medical aspects of surgical treatment, [Brofman] 630—ab
coronary disease, statistics on, 374
coronary endarterectomy in dogs, [May] 751—ab
coronary insufficiency, estrogens for? 1360
coronary insufficiency, retrosternal novocaine anesthesia for, [Ostapiuk] 628—ab
coronary, intercoronary anastomoses, angiography after death, [Vastesaeger] 2239—ab
coronary occlusion, extension of limits of cardiac viability with, [Webb] 1188—ab
coronary perfusion and carbon dioxide regulation in intracardiac operations, [Spencer] 1187—ab
disease, general, angioid streaks and, [Scheie] 297—ab
grafting, indications and results in peripheral arteriosclerosis, [Wylie] 1636—ab
grafting, peripheral, [Martin] 2011—ab
intima, metachromasia in unilateral nephrogenic hypertension, Spain, 2106
mammary, internal, ligation for angina pectoris, [De Matteis] 747—ab; 914
occlusive disease, bypass graft in, [Payne] 1504—ab
peripheral disease, intra-arterial therapy of lesions caused by, [Becattini] 1345—ab
pulmonary, aberrant, with intralobar sequestration, [Anderson] 102—ab
pulmonary, aorticopulmonary septal defect: diagnosis, surgical treatment, [Cooley] 1082—ab
pulmonary infarction, warfarin sodium for, [Fremont & Jagendorf] *1381
pulmonary, transposition of aorta and, with pulmonary stenosis, [Cleland] 1337—ab
renal, congenital malformation causes hypertension, [Isaac] 115—ab; (unilateral) [Royer] 1340—ab
renal obstruction, indications for aortography in, results of surgical treatment, [Poutasse & Dustan] *1521
roentgen study, carotid angiography, hydraulic device to control injection during, [Epstein & Epstein] *679
roentgen study in atherosclerosis and atherosclerotic aneurysms, [Eiseman] 291—ab
spinal, anterior, syndrome, [Lindquist] 1337—ab
subclavian thrombosis and cervical rib, [Shenfeld] *235
superior mesenteric root, duodenal obstruction due to compression by, [Tyson & Keegan] *1665
ARTERIOSCLEROSIS
aortic anatomic and roentgen changes in, [Lodwick] 1759—ab
arcus senilis in young persons relation to, 204
atherosclerotic aneurysms and atherosclerosis, arteriograms in, [Eiseman] 291—ab
coronary, relation to living activities and environmental factors, N. Y., 372
deaths from, Sweden, 1624
fat loads (acute) effect on blood lipids in atherosclerosis, [Horlick] 1317—ab
lipoproteins and atherosclerosis study, [Lewis] 2229—ab
peripheral, arterial grafts for, indications and results, [Wylie] 1636—ab
ARTERIOSCLEROSIS—Continued
pulmonary, of unkown etiology in infant, [Cawley] 2132—ab
renal hypertension and; indication for aortography, surgical treatment of obstructive lesions, [Poutasse & Dustan] *1521
sudden deafness and its relation to atherosclerosis, [Hallberg] *1649
wheat germ, unsaturated fatty acids and prevention of atherosclerosis, 111
ARTERITIS: See also Periarteritis
obliterative brachiocephalic: pulseless disease of Takayasu, [Gibbons] 628—ab
temporal, [Panter] 190—ab
ARTHRITIS
Arthritis and Rheumatism, bimonthly journal starting in 1958, 1162
monarticular, after poliomyelitis vaccination, indicates gout, (reply) [Kadish] 119
multiple, in reticulohistocytosis, [Warin] 1212—ab
pseudorheumatoid, hemopoietic system conditions resulting in, [Davis] 1498—ab
ARTHRITIS, RHEUMATOID
etiology: maladaptation to psychobiological stress, Canada, 1619
L. E. phenomenon in, [Friedman] 285—ab; [Parr] 1318—ab
of cricoarytenoid joints, [Copeman] 880—ab
peptic ulceration occurring during therapy for, [Kern] 1742—ab
polyarthritis and skin rash in Australia, [Fuller] 1871—ab
polyarthritis, fever, and lymphadenopathy in young man, (Diagnostic Problems) [Kushner & Szanto] *1690
presenting as tenosynovitis, [Jacobs] 752—ab
similarity to multiple myeloma, [Davis] 1498—ab
statistics on, India, 273
treatment: cortisone vs. prednisone, [Medical Research Council & Nuffield Foundation] 182; 1888—ab
treatment, prednisone and prednisolone: gastrointestinal manifestations after, [Stolzer & others] *13
treatment prolonged with prednisone, [Cohen & others] *225
ARTHROSIS
pain in knees due to, ultrasonic treatment, Sweden, 1302
ARTISTS
4 physicians honored as, exhibit tours, 56
ARYL SULFONYLUREAS: See Sulfonylureas
ASBESTOS
shingles, danger from using rain water collected off, 1089
ASCARIASIS
treatment, dithlazanine, effective, [Swartzwelder & others] *2063
ASCITES
action of delta-cortisone on, alcoholic cirrhosis with, [Fraisse] 1086—ab
assay of coagulation factors in ascitic fluid to determine ascites of cirrhotic origin, [Combrisson] 1213—ab
chylous, and chylothorax, [Nix] 1326—ab
sodium diuresis from amphenone in, [Wolfe] 1644—ab
ASCORBIC ACID
milkmen's orange drinks deficient in, U. K., 1174
potentiate antibiotics in streptococcic infections? 642
ASIAN INFLUENZA: See Influenza
ASPHYXIA
syncope in the newborn, intrafunicular blood transfusion for, [Marchesoni] 888—ab
ASPIRIN: See Acetylsalicylic Acid
ASSAULT AND BATTERY: See also "Malpractice" under Medicolegal Abstracts at end of letter M
consent to operations and other procedures, [Medicine and the Law] 65
ASSOCIATION: See also American Medical Association; Societies, Medical: list of Societies at end of letter S
of American Medical Colleges, (teaching institute) 1399; (future need for physicians) 1402
of American Physicians and Surgeons, essay contest sponsored by, (Miscellany) [Gustavson] *96
of Life Insurance Medical Directors of America, selected proceedings, 1956, (Council article) [Irwin] *1574
ASTHMA
acne, and attitude, 1152—E
bronchial, fungus allergens in etiology, Spain, 2107
bronchial, intrinsic (nonallergic), as manifestation of fibrocystic disease of pancreas, [Derbes] 1341—ab
bronchial, limited use of chlorpromazine in, [Michelson] 1644—ab
bronchial, prednisolone for, [Rosa] 1208—ab
bronchial, prednisolone hemisuccinate intravenously for, [Sicuteri] 410—ab

V 165
1957

ASTHMA—Continued
bronchial, specific hyposensitization as long term treatment, [Bruun] 1210—ab
cardiac, clinical observations, [Swineford] 1077—ab
etiology: antibiotics, [Jacquelin] 1643—ab
in children, prolonged corticosteroids for, tests for food allergy in, (reply) [Engelsher] 120
so-called bakers' and millers', etiology and pathogenesis, [Klunker] 635—ab
treatment, methylprednisolone, [Feinberg & others] *1560
treatment, quinacrine and chloroquine, Norway, 2106
wheezing, tracheal and major bronchial compression as cause of, [Dekker] 185—ab
ATABRINE: See Quinacrine
ATAXIA
static, alcohol causes, [Pihkanen] 293—ab
ATELECTASIS: See Lungs, collapse
ATHEROMA
calcified, U. K., 1738
ATHEROSCLEROSIS: See Arteriosclerosis
ATHLETE'S FOOT: See Dermatophytosis
ATHLETICS: See also under specific sport, as Boxing; Golf
neurological case histories of two Olympic champions, [Jokl] *1229
ATOMIC BOMB
request A. M. A. position on shelter program, 1011
ATOMIC ENERGY: See also Radioactive
Commission, (research contracts) 1609; (fellowships) 1722; 1980; (Distinguished Service award) 2210
dermatological radiation therapy in nuclear age, [Crossland] *647
Dr. W. Edward Chamberlain heads VA atomic medicine, 857
first nuclear reactor in hospital dedicated at U. S. Naval Hospital, 2210
in medicine, cobalt-60 beam unit installed at Cancer Institute, India, 1986
nuclear medicine, certification in radiology, [Childs] *1545
nuclear training center in Puerto Rico, 1285
nuclear training for Army medical officers, 1847
research program for science teachers, 1606
special fellowships in, 1847
West Virginia U. joins Oak Ridge Institute, 1977
ATOSIL: See Promethazine
ATRIAL FIBRILLATION
after mitral valvulotomy, characteristics and predisposing factors, [Heinz] 184—ab
etiology: accidental electric shock, [Wehrmacher] *349
regularized by quinidine, [Riss] 285—ab
ATROPINE
preanesthetic use in glaucoma, [Schwartz & others] *144
premedication for tonsillectomy in children, 201
ATTITUDES
acne, asthma, and, 1152—E
AUTOMATISM and hypoglycemia, U. K., 1991
AUTOMOBILES: See also "Motor Vehicles" under Medicolegal Abstracts at end of letter M
accident injury study in Colorado, 72
accidents, causes, including alcoholism, Sweden, 626
accidents, first aid by physicians at site of, [Carstensen] 2123—ab
accidents, Northwestern U. research program, 1063
driving licenses for drug addicts? Denmark, 721
AUTOPSIES: See also Medicolegal Abstracts at end of letter M
blood alcohol errors at, sampling technique, (replies) [Harger] 725—C; (medicolegal problems) [Muehlberger] 726—C; [Heise] 1739—C; [Turkel & Gifford] 1993—C
format of medicolegal forms, [Medicine and the Law] *697
internship hospitals with highest rate, 457
AVIATION
aerotitis media, [Schechter] 1885—ab
A. M. A. Committee on, new, under Council on Industrial Health, 56
A. M. A. recommends that Civil Aeronautics Administration establish medical department, 2091
Army Medical Officers, wings for, 77
health center, postgraduate program at Harvard, 1715
in-flight hyperventilation during jet pilot training, [Balke] 905—ab
medicine, government school set up at Bangalore, India, 180
medicine, graduate naval training, 1149
medicine, health in heavens, (reply) [Benford] 91—C
medicine, Randolph Air Force Base, all specialty training at, 1722
medicine, school of, Dr. Lamb appointed chief of internal medicine department, 77

AVIATION—Continued
physician's role in air travel, [Spiegel] *205; (reply) [Lederer] 1487—C
psychosomatic disorders in pilot trainees, [Phillips] 1880—ab
safe transportation of newborn for emergency surgery, [Bishop] *1230
transportation of sick and injured in civilian aircraft, [Wright] *808
AVIATION, U. S. AIR FORCE
consultants visit medical installations, 77; 857
Dr. Hess visits installations in Saudi Arabia and Middle East, 1609
evacuation system, 1289
Hospital Reserve, opportunity for service in, 1719
medical procurement program, 1450
new hospitals, (photos) 1289; 1609; 1722
AXILLA
metastases after radical mastectomy, treatment, 118
AZACYCLONOL
tranquilizer for symptomatic psychoses, Peru, 1474
treatment of chronic schizophrenia [Odland] *333, (reply) [Zeisler] 1739—C
AZOTEMIA
in kidney insufficiency, "flapping tremor" without hepatic disease, [Smythe & Baroody] *31
AZULFIDINE: See Salicylazosulfapyridine
AZURE A RESIN
Segal's tubeless gastric analysis with, cancer detection program, [Fentress & Sandweiss] *21

B

BACK
residual iodized oil cause vague aches and pains? 114
BACKACHE
low, operative treatment, Norway, 2106
method of strapping lumbosacral region, [Bate] *153
posterior compression causes, [Teneff] 1323—ab
BACTEREMIA
gram-negative bacilli causes, in diabetes, [Martin] 1869—ab
micrococcal, without endocarditis, [Schirger] 1342—ab
BACTERIA
anaerobic infections, antibiotics for, [de Lavergne] 898—ab
anaerobic infections in man, Canada, 1172
flora in chronic bronchitis, treatment, United Kingdom, 276
BALDNESS: See Alopecia
BALLOON
double, for bleeding esophageal varices, 640
BARBITURATES
ganglionic blocking effects of malonylurea derivative, [Mininni] 897—ab
intoxication, acute, [Koppanyi] 739—ab
BARIUM
carbonate inhalation, hazards in manufacture of tile blocks, 913
BASEDOW'S Disease: See Goiter, Toxic
BASIC SCIENCES
enrollment in, 1418
schools, approved, in U. S., 1407
schools, students and graduates in U. S., 1931-1957 1420
BEACHES
contaminated, United Kingdom, 391
BEANS: See Soybeans
BECK OPERATION: See Arteries, coronary
BEDS: See also Hospitals, beds
bed rest, modified, in tuberculosis and pregnancy, [Schaefer & others] *2163
BEHAVIOR
aggressive, stabilizing effects of occupational therapy on chronic psychotics, [Robin] 1332—ab
changes in chronic schizophrenia after azacyclonol, [Odland] *333
psychic, of infants kept in nursery, [Bertoye] 1200—ab
BEHÇET SYNDROME
encephalomyelopathy in, necropsy findings, [McHenemey] 1880—ab
nervous system involvement, isolation of virus, [Evans] 2012—ab
BELGIUM
state medicine proposals, efforts to combat, (Medicine at Work) [Golin] *19
BENEMID: See Probenecid
BENODAINE: See Piperoxan
BENZATHINE PENILLICIN G
prevention of streptococcic infections with, [Morris & Rammelkamp] *664
toxicity: reactions after multiple injections, [Sherwood & others] *667
treatment alone or plus procaine penicillin in children with acute respiratory infections, [Githens] 1085—ab
BENZIDINE
bladder cancer from handling, United Kingdom, 275

BERGAMOT OIL
for sun tanning? 909
BERNHARDT'S DISEASE: See Meralgia paresthetica
BEVERAGES
iced drinks postoperatively? 1770
BICILLIN: See Benzathine Penicillin G
BIERRING, WALTER L., August *Journal of the Iowa State Medical Society* dedicated to, 706
BILE DUCTS
benign occlusion, anastomosis in, [Madsen] 1195—ab
calculi in common duct, [Hosford] 188—ab
common, choledochal cyst demonstrated by oral cholecystography, [Moseley] 305—ab
hepatic, spontaneous rupture, [Snyder] 1505—ab
roentgen study in biliary tract surgery, [Corff] 1502—ab
roentgen study (operative), importance of visualizing proximal portion of common and hepatic ducts, [McCabe] 1322—ab
BILIARY TRACT
surgery, operative cholangiography in, [Corff] 1502—ab
BILIRUBIN in Blood: See Blood bilirubin
BIOCHEMISTRY
drug reactions, enzymes, and biochemical genetics, (Council report) [Motulsky] *835
Institute of Faculty of Medicine of Lima dedicated, Peru, 86
BIOLOGIC PRODUCTS: See also Serum; Toxoid; Vaccine
severe immediate reactions to, caused by silk allergy, [Brown & Coleman] *2178
BIOPSIES: See under specific organ, as Liver
BIOT'S BREATHING: See Respiration
BIRTH: See Infants, Newborn; Labor
Premature: See Infants, premature
Rate: See Vital Statistics
Stillbirth: See Stillbirth
BIRTH CONTROL: See Contraception
BISHYDROXYCOUMARIN
hypoprothrombinemia from, oral phytonadione in, [Shoshkes & others] *330
myocardial infarction prevention by, Norway, 2105
treatment after cerebral thrombosis, control and duration of, 116
BISTREPTASE: See Streptokinase—Streptodornase
BISTRIUM: See Hexamethonium
BITES: See Dogs; Scorpions; Snakes; Ticks
BLADDER
artificial, use ascending colon, Portugal, 1991
cancer and tobacco, France, 1299
cancer from handling benzidine, United Kingdom, 275
excision, total, [Schwartz] 1204—ab
inflammation, acute hemorrhagic, with pleuropneumonia—like organisms, [Berg] 302—ab
tumors, Au^{198} for, [Yates-Bell] 195—ab; (superficial, malignant) [Tuovinen] 307—ab
tumors (papillary, multiple superficial), Au^{198} intravesically for, apparatus, United Kingdom, 88
tumors, transcystoscopic radioactive colloidal chromic phosphate for, [Christensen] 1640—ab
BLANKETS
hospital, cleaning, United Kingdom, 1176
BLASINGAME, F. J. L., honored for appointment as A. M. A. General Manager, (photo) 1056
BLASTOMYCOSIS: See also Chromoblastomycosis
cerebellar, neoplastic form, [Aun] 2018—ab
BLINDNESS
complete, retrolental fibroplasia which has not progressed to, [Gregory] 759—ab
grants for research in, 852
BLOOD: See also Medicolegal Abstracts at end of letter M
Agammaglobulinemia: See Gamma Globulin
alcohol, error at autopsy, sampling techniques, (replies) [Harger] 725—C; (medicolegal problems) [Muehlberger] 726—C; [Heise] 1739—C; [Turkel & Gifford] 1993—C
alcohol, terminal, in fatal acute alcoholism, [Kaye & Haag] *451
aldolase, cholesterol, α_2-globulin, iron, copper and lactic dehydrogenase compared to transaminase in myocardial infarction, [Hanson] 1315—ab
Aminopherase: See Transaminase
ammonia after storage, [Greenberg & others] *348
ammonia in liver disease, intragastric administration of whole blood effects on, [Young] 1757—ab
antibacterial action after oral antibiotic combinations, [Jones] 2237—ab
bilirubin, hyperbilirubinemia as guide for exchange transfusions in hemolytic disease in newborn, [Pierce] 1881—ab
calcium, hypercalcemia and sarcoidosis, cortisone for, [Koster] 1321—ab
calcium, idiopathic hypercalcemia, [Shiers] 901—ab
Cells: See Erythrocytes; Leukocytes

BLOOD—Continued
chimeras, study of surviving twins, [Nicholas] 1200—ab
cholesterol elevated, reduce by large doses of nicotinic acid, [Parsons & Flinn] *234
cholesterol, hypercholesteremia relation to arcus senilis in young persons, 204
cholesterol in medical students, variability in, [Thomas] 2238—ab
cholesterol to predict familial coronary disease, 2140
cholinesterase, test for, in workers exposed to organic phosphate insecticides? 315
circulation, extracorporeal, in cardiac and aortic surgery [Cooley] 630—ab
circulation, extracorporeal, in open cardiac surgery, [Pratt] 751—ab; [Keown & others] *781
Circulation, maintain in resection and homograft of innominate and carotid arteries, [De Bakey] 1499—ab
circulation, peripheral collapse during surgery, cardiac monitor to detect and differentiate, [Simpson] 748—ab
circulation, portal-systemic collateral, to prevent coma with increased brain and cerebrospinal fluid amino acids in Eck's fistula in dogs, [Bollman] 1878—ab
circulatory obstruction of myocardium and other factors in determining success of mitral valvotomy, [Mounsey] 1873—ab
citrate and potassium in penicillin G daily effect on, 765
Coagulation, Anticoagulants: See Anticoagulants
coagulation, C-reactive protein relationship in children with various diseases, [Vest] 1202—ab
coagulation, delayed, treatment, vitamin K and calcium gluconate? 1224
coagulation factors in ascitic fluid to distinguish ascites of cirrhotic origin, [Combrisson] 1213—ab
coagulation in alimentary lipemia, Canada, 1171
coagulation time decreased in man 40 treated for hypertension, significance, 204
cord: hemoglobin, reticulocyte percentage and maternal antiglobulin titer in prognosis of hemolytic disease, [Kelsall] 1750—ab
diseases, Hematology Research Foundation grants, 1161
Donors: See Blood Transfusion
Dyscrasia: See also specific dyscrasias as Leukemia
dyscrasias after promazine, (Council report) *885
dyscrasias, Chédiak-Higashi syndrome, [Donohue] 2014—ab
dyscrasias, chickenpox in patients using cortisone with, [Nichols] 2233—ab
dyscrasias, registry, annual report on, 1002
enzymes in muscular dystrophy and other muscular and neuromuscular diseases, [Pearson] 413—ab
Eosinophils Circulating in: See Eosinophils
Fats: See Blood Lipids
fibrinogen, afibrinogenemia, likelihood or incidence in missed abortion, 1893
fibrinogen, afibrinogenemia, Switzerland, 388
fibrinogen, congenital afibrinogenemia, [Grossman] 1298—ab
fibrinogen, hypofibrinogenemia in pregnancy, [Tortora] 406—ab
Globulin: See Gamma Globulin: Globulin
Glucose: See Blood sugar
glycoprotein in tuberculosis of lung, India, 1472
Groups: See also Rh Factor
groups, ABO, and gastric ulcer, [Balme] 876—ab
groups, ABO, ethnologic aspects of disease associations, [Buckwalter & others] *327
groups, ABO isoimmunization causes hemolytic disease of newborn, [Sabin] 1340—ab
groups, blood chimeras, study of surviving twins, [Nicholas] 1200—ab
groups, paternity tests in proceedings for nonsupport, [Medicine and the Law] 2204
hematology fellowships established, 1719
hematology: record of century, [Dameshek] *28
hemograms, Belgium, 1297
Iodine (protein-bound), values for infants, 2141
iron changes in anemia, India, 1621
iron, copper, and transferrin in malignant diseases, Austria, 85
lactic dehydrogenase to diagnose myocardial infarction, [MacDonald & others] *35
lipid partition in leprosy and tuberculosis, India, 1472
lipids, blood coagulation in alimentary lipemia, Canada, 1171
lipids in atherosclerosis, effect of acute fat loads on, [Horlick] 1317—ab
lipids in normal persons, lipoproteins and atherosclerosis study, [Lewis] 2239—ab

BLOOD—Continued
loss at operation, continuous measurement, [Borden] 1746—ab
penicillin after various preparations in prophylaxis of rheumatic fever, [Mozziconacci] 1085—ab
pepsinogen vs. tubeless gastric analysis, [Sievers] 1634—ab
pH, bicarbonate and potassium changes during total body perfusion with pump-oxygenator, [DeWall & others] *1788
phosphatase (alkaline) activity in tumor metastases, [Meischke-de Jongh] 413—ab
Plasma: See Blood Transfusion: Plasma
platelets, febrile transfusion reactions caused by sensitivity to, [Brittingham & Chaplin] *819
Poliomyelitis Antibodies in: See Poliomyelitis
potassium: effects of ACTH, epinephrine, and cortisone compared, India, 867
potassium, hyperkalemia in hereditary episodic adynamia, [Kaplan] 1331—ab
potassium, hypopotassemia, clinical manifestations, [Surawicz] 99—ab
Protein: See also C-Reactive Protein, Gamma Globulin: Globulin
proteins, electrophoretic analyses, India, 273
proteins, myeloma-type, in lymphoma and lymphatic leukemia, [Azar] 2021—ab
Prothrombin: See also Blood coagulation
prothrombin, hypoprothrombinemia from bishydroxycoumarin, oral phytonadione for, [Shoshkes & others] *2330
prothrombin, hypoprothrombinemia from warfarin sodium, [Shapiro & Ciferri] *1377; [Fremont & Jagendorf] *1381
salting fish meat to remove, residual salt in relation to salt free diet, (replies) [Trimble: and original consultant] 120
sedimentation, C-reactive protein relationship in children with various diseases, [Vest] 1202—ab
sedimentation in tuberculosis of lung, India, 1472
sedimentation rate in diagnosis of myocardial infarction, [Pinc] *1776
sedimentation rate increased in otherwise healthy person, antibiotics for? 642
sedimentation rate, Westergren technique, (reply) [Gradwohl] 2142
sodium and potassium, physiologic role, India, 1470
studies in differential diagnosis of abdominal trauma, [Berman & others] *1537
sugar, hypoglycemia and automatism, United Kingdom, 1991
sugar, hypoglycemia in Solox intoxication, [Hammack] *21
sugar, new method for estimating, United Kingdom, 390
sugar test results after standing, 1517
tests and legitimacy, U. K., 275
tests, diagnostic aids in myocardial infarction, [Losner] 1744—ab
Transaminase: See Transaminase
Types: See Blood groups
whole, intragastric administration effect on blood ammonia in liver disease, [Young] 1757—ab

BLOOD PRESSURE
determination by patient at home in long-term hypertension therapy, [Hoobler] *2143
diagnostic procedures for pheochromocytoma, [Masson & others] *1555
in anomalous connection of right pulmonary veins to superior vena cava with interatrial communications, [Swan] 1183—ab
in essential hypertension, Rauwolfia serpentina and reserpine effect on, [Sheldon] 1753—ab
in infants, flush method to determine, [Moss] 1199—ab
in women, India, 1734
intraventricular, physiological explanation in constrictive pericarditis, 1897
low, controlled in neurosurgery, N. Z., 180
low, hazard of immediate postoperative period, [Dripps] *795
low, persistent in postoperative adrenal insufficiency, [Adams & Siderius] *41
low, postoperative, [Barbour & Little] *1529
low, postural collapse from chlorpromazine, Finland, 867
systemic, role in cerebral circulation in carotid and basilar artery thrombosis, [Shanbrom] 2012—ab
ventricular, to evaluate risk in surgery for ventricular septal defects, [Kay & others] *2168

BLOOD PRESSURE, HIGH
aging of arteries in relation to, [Conway] 732—ab
blood clotting time decreased in man 40 treated for, significance, 204
diagnosis, urine catecholamines to differentiate from pheochromocytoma, [Henry] 1869—ab

BLOOD PRESSURE, HIGH—Continued
effect of Rauwolfia serpentina and reserpine on, [Sheldon] 1753—ab
endangiitis, generalization of endagiitis obliterans and, [Holle] 1745—ab
essential, renal biopsies in, [Saltz] 1745—ab
etiology: congenital malformation of renal artery, [Isaac] 415—ab; [Royer] 1340—ab
etiology: resection of coarctation of aorta, [Sealy] 1081—ab
etiology: trauma? 1357
in poliomyelitis, [Kemp] 755—ab
intermittent, diagnostic significance, 2243
nephrogenic, unilateral, metachromasia in intima of arteries and arterioles in, Spain, 2106
Portal Hypertension: See Portal Vein
postpartum, [Finnerty & others] *778
pulmonary, arterial bed of lung in, [Short] 1347—ab
pulmonary (primary), (clinical and anatomicopathological aspects), [Caiul] 413—ab; [Kuida] 2007—ab; (in infant) [Rosenberg] 2014—ab
pulmonary, Raynaud's disease in, [Smith & Kroop] *1245
renal, and arteriosclerosis, [Poutasse & Dustan] *1521
retinopathy improves after adrenal resection and sympathectomy, [Frayer] 2235—ab
surgical treatment, effect of division of hypophysial stalk, [Keedy] 881—ab
surgical treatment, nephrectomy successful after aorticorenal embolus, [Stone] 189—ab
treatment, ganglion-block, [Rounov-Jessen] 1080—ab
treatment, mecamylamine, [Cottler] 1743—ab; [Giordano] 2236—ab
treatment, new reserpine preparation, [Bardelli] 1643—ab
treatment, new root factor of Rauwolfia, United Kingdom, 1735
treatment, practical long-term, [Hoobler] *2143
unilateral renal disease in, radioactive Diodrast renogram as test for, [Winter] 1881—ab
which hypotensive drugs cause exacerbation of glaucoma? 2139

BLOOD TRANSFUSION: See also Medicolegal Abstracts at end of letter M
complications: hepatitis following whole blood, [Katz] 304—ab
contamination of blood, Denmark, 1299
donors, copper sulfate test less than 85% hemoglobin, 2138
donors, thymol turbidity test in screening, [Jennings] 414—ab
erythrocyte survival, Brazil, 866
exchange, for methyl salicylate intoxication, [Adams & others] *1563
exchange, hyperbilirubinemia as guide for in hemolytic disease in newborn, [Pierce] 1881—ab
for regional enteritis, [Bargen] *2045
for sickle-cell anemia, United Kingdom, 274
for systemic lupus erythematosus, 315
in U. S., Joint Blood Council survey, *1135; 1154—C
intrafunicular, for asphyxial syncope of newborn, [Marchesoni] 888—ab
methods and procedures, correspondence course available, 379
national blood program, 1154—E
Pennsylvania Association of Blood Banks organizing, 1604
plasma (human) and animal antihemophilic globulin in surgery in hemophilia, [Macfarlane] 1877—ab
reactions (febrile), sensitivity to donor leukocytes and platelets causes, [Brittingham & Chaplin] *819
replacement for erythroblastosis, criteria for and amount of blood, 425
Rh effect after 17 years, 426
routine, during lumbar disk surgery? 1221
stored blood, ammonia content, [Greenberg & others] *348

BLOOD VESSELS
disease, tobacco smoking and automobile-driving stress in relation to deaths from, [Mills] 1761—ab
intestinal, visceral manifestations of occlusive disease of, [Pratt] 2230—ab
invasion, factor in survival in lung cancer, [Collier] 2227—ab
manifestations, unusual, in Marfan's syndrome, [Austin] 1756—ab
peripheral disease, paravertebral lumbar sympathetic block for, [Crandell] 416—ab; (alcohol block) [Roedling & others] *799
roentgen study, renal failure following, [Dormandy] 1349—ab

BODY
electrical charge generated by, care of patient with, 200
Growth: See also Growth
growth and development study of boy 16 with small body and features, 1766

V 165
1957

BODY—Continued
height and weight, fertility after pregnancy according to, [McKeown] 887—ab
Weight: See also Obesity
weight, portable chair-scale for hospital use, [Silverman & Ikefugi] *826
BOILERS
cleaner, amyotrophic lateral sclerosis in, industrial disease aspect, 2141
oil-fired, vanadium poisoning in, United Kingdom, 723
BONE MARROW
intravenous infusion in patients receiving radiation and chemotherapy, [Thomas] 2130—ab
BONES
cancer, (metastatic), calciuria as indicator of efficacy of hormone therapy in, [Gerbrandy] 1500—ab
Fractures: See Fractures
hyperostosis generalisata of Camurati-Engelmann type, [Roth] 397—ab
hypophosphatasia, [Currarino] 2134—ab
involvement in 2 of 12 cases of sporotrichosis, [Mikkelsen] 2224—ab
lesions disappear in treatment of eosinophilic granuloma by ACTH, [Flosi] 2005—ab
localization of malignant lymphogranuloma, [Pisani] 1759—ab
tuberculosis, antibiotics for, aspects of tubercle bacillus in, [Duriez] 1528—ab
tuberculosis in children treated for primary and miliary tuberculosis, [Milgram] 408—ab
tumors, parosteal sarcoma, x-ray recognition and differentiation, [Stevens] 903—ab
tumors, sarcoma, [Coventry] 1195—ab
BOOKS: See also Book Reviews at end of letter B
A. M. A. booklet on medicolegal forms with legal analysis, 1832
family health record offered by Medical Society of Pennsylvania, 1604
"Guide Book for Residency Programs in General Surgery" available soon, 1964
history of history series on U. S. Army Medical Department in World War II, [Coates] *241
Maimonides' "Regimen Sanitas" republished, Israel, 722
"Sodium Restricted Diets," available through National Research Council, 256
300-year-old, "Tractatus de Corde," by Richard Lower, given to Yale U., 1714
BOOTSTRAPS for forgotten millions, rehabilitation, (Medicine at Work) [Golin] *1145
BORON gasoline, dermatitis from, 1356
BOSS, ARTHUR, treatment for amyotrophic lateral sclerosis discounted, 355
BOSTON UNIVERSITY
School of Medicine, research grants to, 707
BOTULISM
in Labrador, 1859
BOWLING, let's go, [Leisure Corner] *727
BOXING
National Boxing Association, Dr. Ward Wylie, president-elect, W. Va., 1160
BRAASCH, WILLIAM F., portrait presented to Mayo Clinic and Foundation, 1157
BRAIN
abscess, electroencephalogram in, Brazil, 386
abscess with congenital heart disease, [Gund] 1190—ab
amino acids increased in, in coma in dogs with Eck's fistula, [Bollman] 1878—ab
blood circulation; systemic blood pressure role in carotid and basilar artery thromboses, [Shanbrom] 2012—ab
damage after metatraumatic ligation of carotid artery, [Venzlaff] 100—ab
damage, convulsant action of phenothiazine derivatives in, [Fazekas & others] *1241
damaged patient, evaluation and management, [Tobis & others] *2035
degeneration (chronic) in worker exposed to formaldehyde and methyl alcohol, etiologic relationship? 1354
electroencephalography in syphilitic encephalitis, Colombia, 1298
electrotherapy, methitural in, [Robic] 403—ab
encephalography, Austria, 1618
gliomatosis, [Dunn] 1213—ab
hemorrhage, spontaneous subcortical, in young adults, surgery for, [Daws] 880—ab
hemorrhage, spontaneous, surgical treatment, [Gomensoro] 1324—ab
hemorrhage, surgical indications in, [Guillaume] 187—ab
injuries (surgical), care of severely injured patient, [White] *1924
roentgen study, subdural hematoma after, [Robinson] 292—ab
stem encephalitis, [Bickerstaff] 755—ab
surgery, epilepsy in leukotomized patients receiving chlorpromazine, [Liddell] 292—ab
surgery, frontal lobotomy and worker effectiveness, 1359
2 anencephalic monsters born to woman with 2 normal children, hereditary aspects, 311
vascular disease, USPHS research on, 78
BRAIN Continued
waves of divers, United Kingdom, 2218
BREAST
abscess in puerperium, problem of, [Sarason] 1335—ab
cancer, advanced, hypophysectomy for, [Hollander] 295—ab
cancer, detection, heptaldehyde for? 639
cancer, endocrine therapy for menopause after removal? 118
cancer, gonadotropin assays and response to estrogens, United Kingdom, 1735
cancer (inflammatory), treatment, [Dao] 2121—ab
cancer, internal mammary node biopsy in treatment, [Sandy] 1327—ab
cancer, metastatic, adrenalectomy for, [Dao & Huggins] *1793
cancer, metastasized, calciuria as indicator of efficacy of hormone therapy in, [Gerbrandy] 1500—ab
cancer, occult, [Nogues] 295—ab
cancer, radiation therapy, Austria, 85
cancer, steroids and hormones for, annual report on, 1002
cancer with multiple sites of origin, [Qualheim] 1347—ab
changes in male and female after chlorpromazine or reserpine, [Robinson] 2130—ab
engorgement (postpartum), estradiol valerate for, [Rosenblum] 1333—ab
hypertrophy, virginal, with striae, 1517
inflammation (puerperal), staphylococcal infections in obstetric unit, [Wysham] 1747—ab
mammotrophic agent in female urine, nature and origin of, (Hadfield] 193—ab
painful enlargement in boy 15, 1357
plastic surgery and fashion, United Kingdom, 1304
surgery, etiology of lymphedema after radical mastectomy, [Treves] 1326—ab
surgery, radical mastectomy in woman 24, procedures after, 763
surgery, radical mastectomy, treatment for axillary metastases after, 118
tumors, intraductal papilloma, [Hendrick] 1500—ab
BREATH: Breathing: See Respiration
BRICKER Amendment: See Treaties
BRITISH
Health Service: See National Health Service
Medical Students' Association, 1304
BROMSULPHALEIN: See Sulfobromophthalein
BRONCHIECTASIS
childhood, [Swierenga] 1750—ab; (India) 1855
hemorrhage, massive pulmonary, from, Canada, 1732
purulent sputum in, antibiotics effect on, [Douglas] 1633—ab
treatment, intravenous tetracycline, sputum and pulmonary function to evaluate, [Fox] 1208—ab
treatment, prolonged penicillin and oxytetracycline, United Kingdom, 273; [Medical Research Council] 1889—ab
tuberculosis with, significance of, [Curtis] 741—ab
BRONCHITIS
chronic, adult, infective factor and its treatment, [Edwards] 1889—ab
chronic, bacterial flora in, treatment, United Kingdom, 276
chronic, intravenous tetracycline for, sputum and pulmonary function to evaluate, [Fox] 1208—ab
chronic, purulent sputum in, antibiotics effect on, [Douglas] 1633—ab
chronic, vs. pulmonary insufficiency in etiology of cor pulmonale, [Rappaport & Mayer] *1331
emphysema and, [Mayer & Rappaport] *1227
BRONCHOGRAPHY: See Bronchus, roentgen study
BRONCHOSCOPY
general orotracheal anesthesia for, [Reitman] *945
in prevention of postoperative atelectasis, [Brown] *947
BRONCHUS
cancer, anamnesis in patients with, [Feiks] 1496—ab
cancer, differential diagnosis of pneumonia and, in patients over 40, [Shields] 1317—ab
major, compression as cause of asthmatic wheezing, [Dekker] 185—ab
roentgen study in tuberculosis of lung, [Laitinen] 1348—ab
roentgen study, simple technique, [Holland] *1819
tumors, adenoma, [Fraser] 882—ab
tumors, adenoma, resection for, [Overholt] 746—ab
tumors, hamartochondromatosis, [Debré] 1190—ab
tumors, primary granular-cell myoblastoma, [Hebert] 2010—ab
BROXON, W. D., to be labelled as unethical unless he withdraws association with United Mine Workers, 839
BRUCELLOSIS
antigen test for, 424
Brucella abortus isolation by percutaneous liver biopsy, [Cohen] 1871—ab
myocarditis, [Panuccio] 1496—ab
suppuration and calcification of liver and spleen due to, [Spink] 1742—ab
BUBONIC PLAGUE: See Plague
BUREAU of Old-Age and Survivors Insurance: See Social Security
BURNS: See also "Malpractice, burns" under Medicolegal Abstracts at end of letter M
epicardial, relation to late mortality after electrical ventricular defibrillation, [Kortz] 400—ab
extensive, postmortem homografts in, [Davis] 402—ab
mass casualties, initial treatment, [Brown & Glover] *643
thermal, stress ulcers of esophagus perforate after, [Derrick] 882—ab
treatment of keloids after, 1516
BURSITIS
acute subdeltoid, vitamin B_{12} for, [Klemes] 636—ab
olecranon, hydrocortisone for, [Baily] 1211—ab
radiohumeral, is it traumatic? [Paul] 1752—ab
BUTAPYRIN: Butazolidin: See Phenylbutazone
BUTTON, plastic tracheostomy, [Moore] *1276
BUTYL SULFANILYLUREA (carbutamide): See Sulfonylureas

BOOK REVIEWS

Adams, J. C., Outline of Fractures Including Joint Injuries, 762
Adoption
Placement of Adoptive Children, [Wittenborn] 2028
Alcoholism
Alcoholism: Basic Aspects and Treatment, [Himwich] 1216
Hospital Treatment of Alcoholism, [Wallerstein & others] 309
American Association for Advancement of Science. Alcoholism, [Himwich] 1216
American College of Chest Physicians. Clinical Cardiopulmonary Physiology, 638
American Physiological Society. Alcoholism, [Himwich] 1216
American Psychiatric Association. Alcoholism, [Himwich] 1216
Anatomy
Functional Neuro-Anatomy Including an Atlas of the Brain Stem, [Buchanan] 2242
Martius' Gynecological Operations with Emphasis on Topographic Anatomy, [McCall & Bolton] 1215
Anesthesia
Anesthesia and Otolaryngology, [Proctor] 1891
Anscombe, A. R., Pulmonary Complications of Abdominal Surgery, 1217
Askey, J. M., Systemic Arterial Embolism, 1512
l'Association des sociétés européennes et méditerranéennes de gastro-entérologie, International Congress of Gastroenterology, 761
Athletics
Sports Injuries: Their Prevention and Treatment, [Featherstone] 1762
Atlas
Atlas of Cardiac Surgery, [Rodriguez] 1217
Atlas of Clinical Endocrinology, [Lisser & Escamilla] 310
Atlas of Commoner Skin Diseases, [Semon & Wilson] 2242
Atlas of Eye Surgery, [Paton & Katzin] 1352
Atlas of Muscle Pathology in Neuromuscular Diseases, [Greenfield & others] 1214
Functional Neuro-Anatomy Including Atlas of the Brain Stem, [Buchanan] 2242
Ball, T. L., Gynecologic Surgery and Urology, 761
Bard, P., editor, Medical Physiology, 907
Barnes, J., Care of Expectant Mother, 906
Biochemistry
Biochemical Disorders in Human Disease, [Thompson & King] 1214
Biology
Medical Radiation Biology, [Ellinger] 1513
Black, M. M., and Speer, F. D., Human Cancer, 108
Blood and Homopoietic System
Henry Ford Hospital International Symposium, Leukemias, [Rebuck & others] 1764
Introduction to Blood Group Serology, [Boorman & Dodd] 2136
Bluefarb, S. M., Kaposi's Sarcoma, 1088
Boorman, K. E., and Dodd, B. E., Introduction to Blood Group Serology, 2136
British Medical Journal, Emergencies in General Practice: Specially Commissioned Articles, 2028
Buchanan, A. R., Functional Neuro-Anatomy Including an Atlas of the Brain Stem, 2242

Calderwood's Orthopedic Nursing, [Larson & Gould] 1217
Cancer
Human Cancer, [Black & Speer] 108
Canfield, N., editor, Diseases of the External Ear, (by Senturia) 2242
Cantor, M. O., and Reynolds, R. P., Gastro-Intestinal Obstruction, 1764
Cardiovascular System
Atlas of Cardiac Surgery, [Rodriguez] 1217
Blood Pressure Sounds and Their Meanings, [Malcolm] 1511
Clinical Aspects of Arteriosclerosis, [Rinzler] 1512
Clinical Cardiopulmonary Physiology, [American College of Physicians] 638
Electrocardiogram, [Sigler] 1215
Mechanisms of Hypertension with a Consideration of Atherosclerosis, [Schroeder] 1218
Pathogenesis of Coronary Occlusion, [Morgan] 1087
Peripheral Circulation in Health and Disease, [Redisch & Tangco] 1511
Plastic Arterial Grafts, [Edwards] 2240
Salient Points and Value of Venous Angiocardiography in Diagnosis of Cyanotic Types of Congenital Malformations of the Heart, [Gasul & others] 2136
Systemic Arterial Embolism, [Askey] 1512
Cavanagh, J. B., Fundamental Marriage Counseling: 638
Chronic Illness in United States, Volume I: Prevention of Chronic Illness, [Commission on Chronic Illness] 1513
Ciba Foundation Colloquia on Ageing
Volume 3: Methodology of the Study of Ageing, [Wolstenholme & O'Connor] 907
Commission on Chronic Illness, Chronic Illness in the United States, Volume I, 1513
Craig and Faust's Clinical Parasitology, [Faust & Russell] 1763
Curtis, A. C., editor, Kaposi's Sarcoma, (by Blumfarb), 1088
Davidson, M., editor, Medical Ethics, 1891
Davison, W. C., and Levinthal, J. D., Compleat Pediatrician, 1216
De Palma, A. F., Degenerative Changes in Sternoclavicular and Acromioclavicular Joints in Various Decades, 1217
editor, Clinical Orthopaedics, 1513
Dermatology
Atlas of the Commoner Skin Diseases, [Semon & Wilson] 2242
Practical Dermatology, [Peck & Palitz] 907
Diagnosis
Physical Examination in Health and Disease, [Kampmeier] 2136
Digestive System
Clinical Gastroenterology, [Palmer] 2241
Gastro-Intestinal Obstruction, [Cantor & Reynolds] 1764
International Congress of Gastroenterology, Fifth Meeting of l'Association d.s societés européennes et méditerranéennes de gastroentérologie, 761
Magnetic Removal of Foreign Bodies, [Equen] 120
Dill, L. V., Modern Perinatal Care, 1763
Dripps, R. D., chairman and editor, Physiology of Induced Hypothermia, 1217
Dufault, P., Diagnosis and Treatment of Pulmonary Tuberculosis, 1350
Economics, Medical
Health and Medical Care in New York City, 2240
Edwards, W. S., Plastic Arterial Grafts, 2240
Ellinger, F., Medical Radiation Biology, 1513
Emergencies in General Practice: Specially Commissioned Articles from British Medical Journal, 2028
Endocrinology
Atlas of Clinical Endocrinology Including Text of Diagnosis and Treatment, [Lisser & Escamilla] 310
Hypophysectomy, [Pearson] 1351
Epidemiology
Principles of Epidemiology, [Taylor & Knowelden] 197
Equen, M., Magnetic Removal of Foreign Bodies, 120
Ethics, Medical
Medical Ethics, [Davidson] 1891
Faust, E. C., and Russell, P. F., Craig and Faust's Clinical Parasitology, 1763
Featherstone, D. F., Sports Injuries, 1762
Fishbein, M., Medical Writing, 1892
Forster, F. M., editor, Modern Therapy in Neurology, 1088
Furlong, R., Injuries of the Hand, 1891
Gasul, B. A., and others, Salient Points and Value of Venous Angiocardiography in Diagnosis of Cyanotic Types of Congenital Malformations of Heart, 2136
Gelvin, E. P., and McGavack, T. H., Obesity, 1088
Gettes, B. C., Practical Refraction, 109
Goff, C. W., editor, Degenerative Changes in Sternoclavicular and Acromioclavicular Joints in Various Decades, (by De Palma), 1217
Gorin, G., and Posner, A., Slit Lamp Gonioscopy, 1216
Graham, H., Surgeons All, 1218
Greenfield, J. G., and others, Atlas of Muscle Pathology in Neuromuscular Diseases, 1214
Gynecology
Abdominal Total Hysterectomy, New Technique: Posterior Approach, [Musgrove] 1350
Gynecologic Surgery and Urology, [Ball] 761
Martius' Gynecological Operations, [McCall & Bolten] 1215
Practical Gynecology, [Reich & Nechtow] 120
Progress in Gynecology, Volume III, [Meigs & Sturgis] 2137
Health and Medical Care in New York City, 2240
Henry Ford Hospital International Symposium, The Leukemias, [Rebuck & others] 1764
Himwich, H. E., editor and arranger, Alcoholism, 1216
Hohmann, G., and Lindemann, K., editors, Handbuch der Orthopädie in vier Bänden, 197
Hospitals
Hospital Organization and Management, [MacEachern] 1352
Hospital Treatment of Alcoholism, [Wallerstein & others] 309
Hughes, E. S. R., Surgery of the Anus, Anal Canal and Rectum, 1351
Hypothermia, Artificial
Physiology of Induced Hypothermia: Proceedings of a Symposium, [Dripps] 1217
Industrial Medicine
Practical Psychiatry for Industrial Physicians, [Ross] 109
Insurance
Health and Medical Care in New York City: Report by Committee for Special Research Project in Health Insurance Plan of Greater New York, 2240
International Congress of Gastroenterology, 761
Javert, C. T., Spontaneous and Habitual Abortion, 1214
Kampmeier, R. H., Physical Examination in Health and Disease, 2136
Kerr, W. G., Surgery: Guide to Surgical Diagnosis and Treatment Including Tropical Surgery, 1762
Knights, E. M., Jr., MacDonald, R. P., and Ploompuu, J., Ultramicro Methods for Clinical Laboratories, 762
Laboratories
Ultramicro Methods for Clinical Laboratories, [Knights & others] 762
Larson, C. B., and Gould, M., revisers, Calderwood's Orthopedic Nursing, 1217
Leukemia
Henry Ford Hospital International Symposium, Leukemias, [Rebuck & others] 1764
Lisser, H., and Escamilla, R. F., Atlas of Clinical Endocrinology Including Text of Diagnosis and Treatment, 310
Locket, S., Clinical Toxicology, 761
McAuliffe, G. W., Practical Otolaryngology, 309
McCall, M. L., and Bolten, K. A., translators and editors, Martius' Gynecological Operations, 1215
MacEachern, M. T., Hospital Organization and Management, 1352
MacNeal, P. S., Alpers, B. J., and O'Brien, W. R., Management of Patient with Headache, 197
Malcolm, J. E., Blood Pressure Sounds and Their Meanings, 1511
Mann, I., Developmental Abnormalities of the Eye, 110
Marriage
Fundamental Marriage Counseling: Catholic Viewpoint, [Cavanagh] 638
Man and Wife, [Mudd & Krich] 2137
Martius' Gynecological Operations, [McCall & Bolten] 1215
Medical History
Surgeons All, [Graham] 1218
Medical Jurisprudence
The Doctor as Witness, [Tracy] 1763
Medicine
Emergencies in General Practice: Specially Commissioned Articles from British Medical Journal, 2028
Meigs, J. V., and Sturgis, S. H., Progress in Gynecology, Volume III, 2137
Metabolism
Fluid and Electrolytes in Practice, [Statland] 1218
Moore, M., Hill of Venus, 1218
Morgan, A. D., Pathogenesis of Coronary Occlusion, 1087
Mudd, E. H., and Krich, A., editors, Man and Wife, 2137
Mulholland, J.H., Ellison, E. H., and Friesen, S. R., editors, Current Surgical Management, 1763
Muscles
Atlas of Muscle Pathology in Neuromuscular Diseases, [Greenfield & others] 1214
Musgrove, F., Abdominal Total Hysterectomy, 1350
Naclerio, E. A., editor, Bronchopulmonary Diseases, 906
Nesbit, R. M., editor, Suprapubic Closure of Vesicovaginal Fistula, (by O'Conor) 1352
Nesselrod, J. P., Clinical Proctology, 310
Neurology
Atlas of Muscle Pathology in Neuromuscular Diseases, [Greenfield & others] 1214
Functional Neuro-Anatomy Including an Atlas of the Brain System, [Buchanan] 2242
Management of Patient with Headache, [MacNeal & others] 197
Modern Therapy in Neurology, [Forster] 1088
Peripheral Nerve Regeneration, [Woodhall & Beebe] 1352
Physiology of the Nervous System, [Walsh] 1350
Précis de neurologie, [Rimbaud] 2137
Nurses and Nursing
Calderwood's Orthopedic Nursing, [Larson & Gould] 1217
Obesity, [Gelvin & McGavack] 1088
Obstetrics
Care of Expectant Mother, [Barnes] 906
Modern Perinatal Care, [Dill] 1763
Spontaneous and Habitual Abortion, [Javert] 1214
O'Conor, V. J., Suprapubic Closure of Vesicovaginal Fistula, 1352
Old Age
Ciba Foundation Colloquia on Ageing, Volume 3: Methodology of the Study of Ageing, [Wolstenholme & O'Connor] 907
Ophthalmology
Atlas of Eye Surgery, [Paton & Katzin] 1352
Developmental Abnormalities of the Eye, [Mann] 110
Practical Refraction, [Gettes] 109
Slit Lamp Gonioscopy, [Gorin & Posner] 1216
Orthopedics
Calderwood's Orthopedic Nursing, [Larson & Gould] 1217
Clinical Orthopaedics, [De Palma] 1513
Degenerative Changes in Sternoclavicular and Acromioclavicular Joints in Various Decades, [De Palma] 1217
Handbuch der Orthopädie in vier Bänden, [Hohmann & Lindemann] 197
Injuries of the Hand, [Furlong] 1891
Outline of Fractures Including Joint Injuries, [Adams] 762
Otorhinolaryngology
Anesthesia and Otolaryngology, [Proctor] 1891
Diseases of the External Ear, [Senturia] 2242
Practical Otolaryngology, [McAuliffe] 309
Palmer, E. D., Clinical Gastroenterology, 2241
Parasitology
Craig and Faust's Clinical Parasitology, [Faust & Russell] 1763
Pathology
Chronic Illness in the United States, Volume I: Prevention, [Commission on Chronic Illness] 1513
Textbook of Pathology with Clinical Applications, [Robbins] 1087
Paton, R. T., and Katzin, H. M., Atlas of Eye Surgery, 1352
Pearson, O. H., editor, Hypophysectomy, 1351
Peck, S. M., and Palitz, L., Practical Dermatology, 907
Pediatrics
Compleat Pediatrician, [Davison & Levinthal] 1216
Pharmacology and Therapeutics
Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, [Sollmann] 108
Morphine & Allied Drugs, [Reynolds & Randall] 110
Physical Examination in Health and Disease, [Kampmeier] 2136
Physical Medicine
Therapeutic Exercise for Body Alignment and Function, [Williams & Worthingham] 310
Physiology
Clinical Cardiopulmonary Physiology, [American College of Physicians] 638
Fundamentals of Human Physiology, [Youmans] 1892
Medical Physiology, [Bard] 907
Physiology of Induced Hypothermia: Proceedings of a Symposium, [Dripps] 1217
Physiology of Nervous System, [Walsh] 1350
Poetry
Hill of Venus, [Moore] 1218
Proctology
Clinical Proctology, [Nesselrod] 310
Essentials of Clinical Proctology, [Spiesman & Malow] 110
Surgery of the Anus, Anal Canal and Rectum, [Hughes] 1351
Proctor, D. F., Anesthesia and Otolaryngology, 1891
Psychiatry
Practical Psychiatry for Industrial Physicians, [Ross] 109
Psychology
Placement of Adoptive Children, [Wittenborn] 2028

V 16
1957

Radiology
Medical Radiation Biology, [Ellinger] 1513
Radioaktive Isotope, [Schmeiser] 2137
Rebuck, J. W., Bethell, F. H., and Monto, R. W., editors, Henry Ford Hospital International Symposium, The Leukemias, 1764
Redisch, W., and Tangco, F. F., Peripheral Circulation in Health and Disease, 1511
Reich, W. J., and Nechtow, M. J., Practical Gynecology, 420
Respiratory Tract
Bronchopulmonary Diseases, [Naclerio] 906
Clinical Cardiopulmonary Physiology, [American College of Physicians] 638
Magnetic Removal of Foreign Bodies, [Equen] 420
Pulmonary Complications of Abdominal Surgery, [Anscombe] 1217
Reynolds, A. K., and Randall, L. O., Morphine & Allied Drugs, 110
Rheumatic Diseases
Rheumatoid Arthritis: Definition of Disease and Clinical Description, [Short & others] 2028
Rimbaud, L., Précis de neurologie, 2137
Rinzler, S. H., Clinical Aspects of Arteriosclerosis, 1512
Rob, C., and Smith, R., editors, Operative Surgery, Volumes Three and Four, 1764
Robbins, S. L., Textbook of Pathology with Clinical Applications, 1087
Rodriguez, J. A., Atlas of Cardiac Surgery, 1217
Rosenthal, S. R., BCG Vaccination Against Tuberculosis, 420
Ross, W. D., Practical Psychiatry for Industrial Physicians, 109
Sarcoma
Kaposi's Sarcoma, [Bluefarb] 1088
Schmeiser, K., Radioaktive Isotope, 2137
Schroeder, H. A., Mechanisms of Hypertension with a Consideration of Atherosclerosis, 1218
Semon, H. C. G., and Wilson, H. T. H., Atlas of the Commoner Skin Diseases, 2242
Senturia, B. H., Diseases of the External Ear, 2242
Short, C. L., Bauer, W., and Reynolds, W. E., Rheumatoid Arthritis, 2028
Sigler, L. H., Electrocardiogram, 1215
Sollmann, T., Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, 108
Speech
Rehabilitation of Speech, [West & others] 110
Spiesman, I. G., and Mellow, L., Essentials of Clinical Proctology, 110
Statland, H., Fluid and Electrolytes in Practice, 1218
Steele, J. D., editor, Surgical Management of Pulmonary Tuberculosis, 1892
Surgery
Atlas of Cardiac Surgery, [Rodriguez] 1217
Current Surgical Management, [Mulholland & others] 1763
Hypophysectomy, [Pearson] 1351
Operative Surgery, Volumes Three and Four, [Rob & Smith] 1764
Plastic Arterial Grafts, [Edwards] 2240
Pulmonary Complications of Abdominal Surgery, [Anscombe] 1217
Surgeons All, [Graham] 1218
Surgery: Guide to Surgical Diagnosis and Treatment Including Tropical Surgery, [Kerr] 1762
Surgery of the Anus, Anal Canal and Rectum, [Hughes] 1351
Taylor, L., and Knowelden, J., Principles of Epidemiology, 197
Thompson, R. H. S., and King, E. J., editors, Biochemical Disorders in Human Disease, 1214
Toxicology
Clinical Toxicology, [Locket] 761
Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, [Sollmann] 108
Tracy, J. E., The Doctor as Witness, 1763
Trauma
Injuries of the Hand, [Furlong] 1891
Outline of Fractures Including Joint Injuries, [Adams] 762
Peripheral Nerve Regeneration: Follow-up Study of 3,656 World War II Injuries, [Woodhall & Beebe] 1352
Sports Injuries: Their Prevention and Treatment, [Featherstone] 1762
Tropical Medicine
Surgery: Guide to Surgical Diagnosis and Treatment Including Tropical Surgery, [Kerr] 1762
Tuberculosis
BCG Vaccination Against Tuberculosis, [Rosenthal] 420
Diagnosis and Treatment of Pulmonary Tuberculosis, [Dufault] 1350
Surgical Management of Pulmonary Tuberculosis, [Steele] 1892
Urology
Gynecologic Surgery and Urology, [Ball] 761
Suprapubic Closure of Vesicovaginal Fistula, [O'Conor] 1352
Waife, S. O., editor, Mechanisms of Hypertension with a Consideration of Atherosclerosis, [by Schroeder] 1218
Wallerstein, R. S., Chotlos, J. W., and others, Hospital Treatment of Alcoholism, 309
Walsh, E. G., Physiology of the Nervous System, 1350
West, R., Ansberry, M., and Carr, A., Rehabilitation of Speech, 110
Williams, M., and Worthington, C., Therapeutic Exercise for Body Alignment and Function, 310
Wittenborn, J. R., Placement of Adoptive Children, 2028
Wolstenholme, G. E. W., and O'Connor, C. M., Ciba Foundation Colloquia on Ageing, Volume 3, 907
Woodhall, B., and Beebe, G. W., editors, Peripheral Nerve Regeneration, 1352
Writing
Medical Writing, [Fishbein] 1892
Youmans, W. B., Fundamentals of Human Physiology, 1892

C

C-REACTIVE PROTEIN
in myocardial infarction, [LaDue] *1776; (value and significance) [Carcassi] 1871—ab
in rheumatic fever, [Rahman] 738—ab
occurrence; relationship to sedimentation, coagulation, and electrophoresis in children with various diseases, [Vest] 1202—ab
test in clinical practice, [Carcassi] 2225—ab
CALCIFEROL
treatment in tuberculosis, India, 1173
CALCIFICATION
in solitary lung nodules, [O'Keefe] 902—ab
mitral, stratigraphy in investigating, [Rizzetto] 196—ab
CALCINOSIS
factor, significance in tuberculosis therapy, [Holtz] 1497—ab
CALCIUM
Carbimide: See Carbimide
gluconate for delayed blood coagulation? 1224
in Blood: See Blood
in management of regional enteritis, [Bargen] *2045
in Urine: See Urine
phosphate, urinary glucuronide effect on solubility, [Vermeulen] 302—ab
CALORIES
sufficient, in surgical patient, 1830—E
CAMOFORM
treatment of amebiasis, [Bustamente y Rivero] *829
CAMURATI-ENGELMANN type of hyperostosis generalisata, [Roth] 397—ab
CANADA
hospitals approved for internships in, 482
medical education in, annual report, 1408
CANCER
branchiogenic, involving base of cranium, [Correa] 1325—ab
congenital, [Beckett] 890—ab
Diagnosis: See also specific organ or region as Prostate
diagnosis (cytologic), fixed and dried smears, mailing of, [Sills & Garret] 2219—C
diffuse scirrhous, [Fischermann] 760—ab
epidermoid, of skin, in situ, Peru, 1622
etiology in bladder; handling of benzidine, United Kingdom, 275
etiology in lung, significance of cell type in, [Doll] 1211—ab
etiology; prolonged estrogens, United Kingdom, 90
etiology; radiation therapy for skin disease, United Kingdom, 89
etiology; sympathetic nervous system lesions, France, 1309
etiology; tobacco and bladder cancer, France, 1299
in Infants: See Infants; Infants, Newborn
metastases, axillary, after radical mastectomy, treatment, 118
metastases, cerebellar from lung, [Fernández] 105—ab
metastasizing, sweat-gland, [Telohi] 892—ab
metastatic, of breast, adrenalectomy for, [Dao & Huggins] *1793
mortality, Japan, 723
multiple sites of origin in breast, [Qualheim] 1347—ab
nomenclature, various systems, 1156
Northwestern U. first annual lecture, 1602
occupational, A. M. A. Committee annual report on, 1007
patients, railway concessions for, India, 867
pituitary gland operations effects on, N. C., 74
precancerous condition, achlorhydria and gastric atrophy, [Hitchcock] 752—ab
precancerous condition, acute colonic obstruction in schistosomiasis japonica, [Ch'en] 1638—ab
precancerous condition, lung scar, [Raeburn] 1635—ab
CANCER—Continued
precancerous condition, malignancy of solitary adenomas, [Keminger] 747—ab
precancerous condition, risk of stomach cancer after medical treatment for ulcer, [Doll] 2230—ab
precancerous condition, vulvar Paget's disease, [Woodruff] 886—ab
recurrence after anterior resection of rectum and sigmoid, [Lofgren] 401—ab
research at Woman's College of Pennsylvania, 708
research grants to Temple University, 264
research, industrial, USPHS, assistant for, 1290
research, lifetime grant awarded to Dr. Price for, Wis., 1718
research, USPHS Board of Scientific Counselors established, 1981
review, annual, United Kingdom, 87
spread in body, observations with lung cancer, [Onnigbo] 1756—ab
studies, laboratory for, Pa., 851
survival, 5-year, in lung cancer, factors influencing, [Collier] 2227—ab
tissue, spectrographic study of trace elements in, [Tietz & others] *2187
Treatment: See also specific organ or region as Breast
treatment, "cobalt bomb" at state cancer hospital, Mo., 1976
treatment, cobalt-60 beam therapy unit, India, 1986
treatment, Co^{60}, Canada, 719
treatment, ethyleneimine quinone, (Austria) 81; 2103; [Di Pietro] 1343—ab
treatment, first British cesium unit, 88
treatment, hemihepatectomy, [Lewis & Bickel] *88
treatment, radiation and chemotherapy, intravenous infusion of bone marrow in, [Thomas] 2130—ab
treatment, Yperite derivatives preoperatively in digestive tract, [Maur] 750—ab
urine beta-glucuronidase in, United Kingdom, 88
CANDIDA: See Moniliasis
CANICOLA Fever: See Leptospirosis
CAPILLARIES: See also Telangiectasia
defect, antihemophilic globulin deficiency with, [Fessey] 2097—ab
CARBIMIDE
calcium, citrated, for alcoholism, (United Kingdom) 1857; [Smith & others] *2181
CARBOHYDRATES
low, high-protein, high-fat diet in treating obesity, [Thorpe] *1361
CARBON DIOXIDE
intravascular, safety of use for roentgen study of intracardiac structures, [Durant] 2024—ab
regulation in intracardiac operations, [Spencer] 1187—ab
CARBON MONOXIDE
poisoning, acute, electrocardiogram in, [Myschetzky] 294—ab
poisoning, statistics, United Kingdom, 1858
CARBONIC ANHYDRASE INHIBITORS: See Acetazolamide
CARBUTAMIDE: See Sulfonylureas
CARCINOID
5-hydroxytryptamine, 5-hydroxyindole acetic acid and histamine determination in, [Pernow] 879—ab
malignant, observations on, [Sjoerdsma] 878—ab
of intestine with hepatic metastases and cardiovascular complications, [Picard] 396—ab
CARCINOMA: See Adenocarcinoma; Cancer; Choriocarcinoma
Argentaffin: See Carcinoid
CARCINOSARCOMA
gastric, [Sánchez-Lucas] 731—ab
CARDELMYCIN: See Novobiocin
CARDIOVASCULAR DISEASE
research grants available, Chicago, 370
research institute at U. of California, 169
studies, grants for, Calif., 169
CARDIOVASCULAR SYSTEM
changes during cooling and rewarming in total circulatory occlusion, [Blair] 417—ab
complications in intestinal carcinoid, [Picard] 396—ab
congenital anomalies in adults, [Johnson & others] *915
origin of postoperative hypotension, [Barbour & Little] *1529
roentgen study in diagnosing pulmonary disease, [Lyons] *1939
roentgen study, intercoronary anastomoses as they appear after death, [Vastesaeger] 2239—ab
roentgen study to diagnose pseudoaneurysm of left ventricle, [Smith] 2226—ab
CAROTID SINUS
myasthenia and, [Yoel] 2010—ab

CARRION, DANIEL ALCIDES (1857-1885)
proved verruga peruana and Oroya fever have same etiology, homage to, Peru, 1622
CASTANEDA ANTIGEN TEST
for brucellosis, 424
CASUALTIES: See also Accidents; Automobiles, accidents; Disasters
mass, initial treatment of burns in, [Brown & Glover] *643
CAT SCRATCH DISEASE: See Lymphadenitis
CATARACT
surgery in diabetic, preoperative care, 765
CATHETERIZATION
of left heart chambers and aorta, technique and complications, [Soulié] 2146—ab
urethral, to determine urinary infection, new technique, [Clabaugh & Rhoads] *815; 838—E
CATHETERS: See also "Malpractice: operations" under Medicolegal Abstracts at end of letter M
for rapid determination of urinary infection, [Doolittle & Cohen] *1391
CATHOMYCIN: See Novobiocin
CATTLE
penicillin resistance in, United Kingdom, 389
CAUSALGIA
[Owens] 1877—ab
paravertebral alcohol block of lumbar sympathetic nerves for, [Roedling & others] *789
CAUTERY ELECTRODE
grasping type to destroy rectal polyps, [Blalsdell] *1392
CELIAC DISEASE
does it exist? [Jeune] 633—ab
CELLS
clear, tumors, of thyroid, [Chesky] 2021—ab
generalized cytomegalic inclusion disease, [McElfresh] 1508—ab
granular, primary myoblastoma of bronchus, [Hebert] 2010—ab
L. E.: See Lupus Erythematosus
mast, in production of heparin, histamine and hyaluronic acid, Brazil, 178
mast, leukemia, presenting as urticaria pigmentosa, [Waters] 407—ab
reticulum, sarcoma, primary of heart, [Kaufman] 2132—ab
type significance in relation to etiology of lung cancer, [Doll] 1211—ab
CENSUS
region and state, internships by, 455; 456
CEREBELLUM
blastomycosis, neoplastic form, [Aun] 2018—ab
cancer metastases from lung, [Fernández] 105—ab
CEREBROSPINAL FLUID
amino acids increased in, in coma, in dogs with Eck's fistula, [Bollman] 1878—ab
leak, unilateral nasal discharge probably due to, 2034
CESAREAN SECTION
repeat, 616 cases, [Baldwin] 1748—ab
succinylcholine drip in, [Kolstad] 192—ab
vaginal childbirth after, 766
CESIUM
unit, first British, 88
CHAGAS' Disease: See Trypanosomiasis
CHAIR
scale, portable, for hospital use, [Silverman & Refugi] *826
CHARCOAL
powdered, hazard of taking over long period of time? 1894
CHEDIAK-HIGASHI SYNDROME
lethal familial disease with inclusions in leukocytes and constitutional stigmata, [Donohue] 2014—ab
CHEMISTRY
A. M. A. Chemical Laboratory, annual report, 1004
CHEMOTHERAPY: See also under specific drugs
of chronic pulmonary histoplasmosis, [Sutliff] 286—ab
of endocarditis lenta, [Kalpainen] 2008—ab
of malignant tumors, Austria, 84
preoperative and postoperative, in nephrectomy for tuberculosis, [Obé] 1206—ab
radiation and intravenous infusion of bone marrow in patients receiving, [Thomas] 2130—ab
CHEST: See Thorax
CHICAGO MEDICAL SCHOOL
neurological clinic for headache studies at Mt. Sinai Hospital, 169
research grants received by, 2206
CHICKENPOX
complications: pneumonia, [Hunnicutt] 1633—ab
in patients with hematologic disease receiving cortisone, [Nichols] 2233—ab
CHILDREN
accidents, prevention, [Jacobziner] 299—ab
air travel by, complications of, [Spiegel] *205; (reply) [Lederer] 1487—C
CHILDREN—Continued
allergy in: corticosteroids treatment, duration, effects on adrenals, 311
allergy in, psychosomatic aspects, [Rapaport] *812
amebiasis in, India, 867
asthma in, prolonged corticosteroids for: test for food allergy, (reply) [Engelsher] 120
atrial septal defect in, [Wagner] 1338—ab
bronchiectasis in, [Swierenga] 1750—ab; (India) 1855
cerebral palsy in, zoxazolamine for, [Watkins & Hale] *830
child care, A. M. A. Committee annual report on, 1041
convulsions in, India, 1855
delinquent, and the family doctor, [Brickman] *339
dermatomyositis in, [Everett] 1080—ab
development accelerated today over 30 years ago? 1765
diabetic, changes in eyegrounds of, [Heinsius] 891—ab
epilepsy in, meprobamate for, [Livingston] 2124—ab
fitness of American youth, (conference report available, further programs) 54—E; (correction) 577; (President's page) 1055
gliomas of optic pathways in, [Fowler] 2120—ab
Growth of: See Growth
hemodialysis in, [Carter] 1508—ab
hiatus hernia in, [Engberg] 1341—ab
hypertension in, unilateral anomaly of renal artery as cause, [Royer] 1340—ab
infectious hepatitis in, Peru, 1989
influenza in, India, 1471
influenza myocarditis in, [Müller] 1750—ab
inguinal hernias (bilateral) in girl 6, surgery for, 124
injured boy charged $1.00 by physician, United Kingdom, 2217
intussusception in, management, [Langlet] 745—ab
isoniazid toxicity in, [Weingärtner] 1201—ab
knock knee in, United Kingdom, 1992
medically indigent, with respiratory infections, penicillin for, [Githens] 1085—ab
meningococcal and pneumococcal meningitis in, massive penicillin for, [Friedenziczki] 1342—ab
mentally ill, treatment unit at state hospital, N. Y., 2207
nephrotic syndrome in, ACTH for, [Mateer; Danowski] 194—ab
neuropsychiatric disturbances in, promazine for, [Vergani] 890—ab
nocturnal enuresis in, anticholinergic drugs for [Bertolotto] 2236—ab
orphans care, help needed, Japan, 625
pancreatitis (acute) in, [Blumenstock] 107—ab
pheochromocytoma in, surgical aspects, [Clausen] 2121—ab
poisoning, aminophylline, [Soifer] 298—ab
poisoning, chlorambucil, [Wolfson & Olney] *239
poisoning from drugs, United Kingdom, 872
poisoning, hazard from lead in paint on toys, [Miscellany] 1996
poisoning, methyl salicylate, exchange transfusion for, [Adams & others] *1363
preschool, accidents in, 1607
reticuloendotheliosis in, [Sanford] 301—ab
retrolental fibroplasia in, not progressed to complete blindness, [Gregory] 759—ab
salmonellosis in, chloramphenicol-tetracycline for, [Streitfeld] 1507—ab
school-age, health services for: new approach, [Jacobziner] *1669
school, hearing tests on, Israel, 625
school, simultaneous Mantoux and Vollmer patch tests in, [Waegele] 308—ab
school, smoking habits of, Norway, 2106
seek identity of brutally murdered boy, 4 or 5, in Philadelphia, (photo) 617
sick, tuberculin sensitivity in, India, 1300
thrombosis of inferior vena cava in, [Liddle] 1340—ab
tonsillectomy in, premedication in, 201
toxoplasmosis in, treatment, [Käser] 891—ab
tuberculosis of lung in, antibiotics influenced course to what extent in? [Pléchaud] 889—ab
tuberculosis (primary) in, protected cortisone therapy, [Del Principe] 298—ab
tuberculous, pulmonary exeresis in, [Wapler] 747—ab
tuberculous, sanatorium for, Peru, 87
typhoid in, India, 1854
various diseases in, occurrence of C-reactive protein and its relationship to sedimentation, coagulation, and electrophoresis in, [Vest] 1202—ab
young, "passing-out": cause and treatment, [Janson] 759—ab
young, spine fusion in, results, growth effects, [Hallock] 745—ab
CHLORAMBUCIL
toxic dose, accidental ingestion, [Wolfson & Olney] *239
treatment of Hodgkin's disease, [Rottino] 2005—ab
CHLORAMPHENICOL
toxicity: aplastic anemia, [Madsen] 304—ab
treatment of typhoid, India, 1987
treatment plus tetracycline in salmonellosis in children, [Streitfeld] 1507—ab
CHLORINE
gas, eye exposure to, cause loss of vision and chorioretinitis? 1360
CHLOROETHYLAMINES: See Nitrogen Mustards
p-(di-2-CHLOROETHYL) AMINOPHENYLBUTYRIC ACID: See Chlorambucil
CHLOROMYCETIN: See Chloramphenicol
CHLOROQUINE
toxicity in dermatologic disorders, [Goldman] 2018—ab
treatment of amebic hepatitis in presence of old myocardial infarction, 1225
treatment of bronchial asthma, Norway, 2106
treatment of creeping eruption, 1769
treatment of rheumatoid disease, (Canada) 721; [Bagnall] 1888—ab
CHLORPROMAZINE
symposium on tranquilizers, Peru, 1472
toxicity: convulsant action, [Frazekas & others] *1241
toxicity: epilepsy in leucotomized patients receiving, [Liddell] 292—ab
toxicity: jaundice after small amount, [Zatowitz] 418—ab
toxicity: jaundice, continued use of drug, [Skromak] 1210—ab
toxicity: photosensitivity, [Epstein] 1638—ab
toxicity: postural hypotensive collapse, Finland, 86
toxicity: side-effects in psychoses, [Stousland] 188]—ab
treatment, and/or zoxazolamine for muscle spasm, [Gibson & others] *18
treatment, breast changes in, [Robinson] 2130—ab
treatment (limited) in bronchial asthma, [Michelson] 1644—ab
treatment of chronic schizophrenia and manic-depressive psychosis, Peru, 87
treatment of mental defectives, [Tarjan] 2124—ab
treatment of mental syndromes, (Canada) 1619; (Brazil) 1730
treatment of tetanic spasm, [Ricci] 2128—ab
treatment plus diethylstilbestrol in severe mental deficiency with malignant masturbatory problems, [Geyer] 2232—ab
treatment plus promethazine and pethidine in eclampsia, [Sheraes] 1376—ab
CHOL—; CHOLE—: See Bile Ducts; Biliary Tract; Gallbladder
CHOLERA
in 19th century, nature of, 1358
CHOLESTEROL: See Blood cholesterol
CHONDROMA
giant, of maxilla, hemifacial removal with enucleation of eye, [Garcia Blanco] 753—ab
CHONDROMALACIA
pain in knees due to, ultrasonic treatment, Sweden, 1302
CHONDROSARCOMA
survival after hemipelvectomy for, [Lewis & Bickel] *8
CHORIOCARCINOMA
of uterus, [Groesclose] 297—ab
sex chromatin in, [Oosterhuis] 414—ab
CHORIORETINITIS
due to fetal mumps infection, [Holowach] 299—ab
eye exposure to chlorine gas cause? 1360
CHOROID
central serous choroidosis with amebiasis, [Brales] 634—ab
CHROMATIN: See Sex chromatin
CHROMIUM
chrome dermatitis, India, 1300
chromic phosphate, radioactive colloidal, transcystoscopic injection of bladder tumors, [Christensen] 1640—ab
CHROMOBLASTOMYCOSIS
treatment, iontophoresis with copper sulfate, technique, 1897
CHRONICALLY ILL: See Disease, chronic
CHYLOTHORAX
chylous ascites and, [Nix] 1326—ab
complication of translumbar aortography, [Gaspar] 2025—ab
due to traumatic lesions of thoracic duct, surgery for, [Giordano] 743—ab
CHYMAR: See Chymotrypsin
CHYMOTRYPSIN
treatment of recurring infectious thrombophlebitis with suprapubic pain and frequent urination, **164**:1857, Aug. 17, 1957; (correction) **165**:711, Oct. 12, 1957

V 16
1957

CICATRIX
cicatrization of wounds, effect of desiccated red blood corpuscles on, [Ellis] 1323—ab
lung, cancer in, [Raeburn] 1635—ab
vaginal, endometriosis in, after hysterotomy for therapeutic abortion, [Gottlieb] 192—ab
CIGARETTES: See Tobacco
CITIZENS
veterans and nonveterans, 2 classes? A. M. A. publication on, 2092
CITRATES
citrated calcium carbimide (Temposil): See Carbimide
in potassium penicillin G given daily, effect on blood, 765
CITRIC ACID
excretion in diagnosis of renal function, [Otto] 1743—ab
CITY FARM WEEK
Nov. 22-28, A. M. A. cooperates in, 256; (annual report) 992
CIVIL AERONAUTICS ADMINISTRATION: See Aviation
CIVILIAN DEFENSE
activities, A. M. A. annual report on, 1008; 1010, (federal activities) 1011
Administration, A. M. A. —FCDA research and study project, 1012
county medical societies conference 841; (program) 842; (annual report on) 1012
disaster training program, N. Y., 1158
legislation to amend federal act of 1950, annual report on, 1011
national conference, annual report on, 1012
CLARK, CECIL W., A. M. A. General Practitioner's award to, (photo) 2089—E; 2200
CLAUDICATION
intermittent: value of intra-arterial therapy, [Bennet-Jones] 1322—ab
CLEANERS
electric motor, thorax pain from? 1768
CLEANING
dirt and cinders from wounds, 2034
CLIMATE: See also Cold; Heat; Winter
advantages for emphysema, 2138
CLINICS: See Medicolegal Abstracts at end of letter M
CLORONAFTINA: See β-Naphthyldichlorethylamine
CLOSTRIDIUM
welchii, experimental food-poisoning by, [Dische] 1493—ab
COAL
Miners: See Miners
tar sensitivity, analgesics and antipyretics which do not contain? 2031
COBALT
bomb at state cancer hospital, Mo., 1976
radioactive, hepatic uptake in differentiation of macrocytic anemias and diagnosis of pernicious anemia and sprue, [Glass] 1870—ab
radioactive labeled vitamin B_{12} in diagnosis of pernicious anemia, [Smythe] 2223—ab
radioactive, therapy, Canada, 719
60 beam therapy at Cancer Institute, India, 1986
COCCIDIOIDOMYCOSIS
pulmonary, VA study, 78
COD LIVER OIL
vitamin D reduced in, U. K., 2217
CODEINE: See also Dihydrocodeine
phosphate vs. propoxyphene hydrochloride vs. placebos for pain, (reply) [Lasagna] 91—C
COFFEE
excess, causes false diagnosis of hyperthyroidism, [Jackson] *1533
to relieve aching and fatigue, how does it work? 913
COGAN'S SYNDROME: See Keratitis, interstitial
COLD: See also Hibernation, Artificial: Hypothermia, Artificial
hypersensitivity, 1515
kidney ischemia and local cooling in sheep, N. Z., 2215
COLDS
vaccines, value of, 1645
COLIMYCIN
treatment of whooping cough, [Lanza] 2236—ab
COLITIS
fulminating, necrotic, fatal after antibiotics, (Brazil) 386; [Nador] 1343—ab
ulcerative, local hydrocortisone hemisuccinate sodium for, [Truelove] 1209—ab
ulcerative, nonspecific, course of, [Banks] 735—ab
ulcerative pathological anatomy of regional enteritis compared, [Lalpply] *2052
ulcerative, prognosis, [Kellock] 2225—ab
COLLAGEN DISEASE
hydralazine syndrome, significance in understanding, [Reynolds & Caldwell] *1823
COLLAPSE: See Shock
COLLEGE: See also University
age population trend in U. S., 1402
record of first-year medical class, 1426
COLLOIDS
colloidal properties of urine, study protective action, U. K., 89
COLON
ascending, for artificial bladder, Portugal, 1991
cancer, operability of, U. K., 89
cancer, recurrence after resection of rectum and sigmoid, [Lofgren] 491—ab
diverticulitis, bleeding in, [Mobley] 1501—ab
diverticulitis, radical vs. conservative treatment, [Greene] 1506—ab
megacolon, [Brazil, 719
megacolon, symptomatic aganglionic, in early infancy, management, [Sieber] 1875—ab
obstruction, acute in schistosomiasis japonica, cancer associated with, [Ch'en] 1638—ab
sigmoid diverticulitis, one stage anterior resection in, [Waugh] 103—ab
sigmoid diverticulitis, sigmoidouterine fistula complicating, [Smalley & others] *827
surgery, antibiotics and, [Cohn] 2230—ab
COLORADO CASE, Judicial Council sesson on, 839
COLORADO TICK FEVER
[Dreyets] 1194—ab
COLOSTOMY
appliance, simple inexpensive, [Hirsch] *152
COMA
increased amino acids of brain and cerebrospinal fluid in dogs with Eck's fistula, [Bollman] 1878—ab
COMMISSION
on influenza of Armed Forces Epidemiological Board, Asian influenza vaccination, *2055
COMMISSUROTOMY: See Mitral Valve
COMMUNITY
cooperation in public health, 1831—E
senior citizen and, (Council article) [Swartz] *694
therapeutic, mental hospital as, VA pilot program, 78
COMPLEMENT
fixation in diagnosis of amebiasis, [Spicknall] 738—ab
COMPOCILLIN V: See Phenoxymethyl Penicillin
COMPOUNDS (listed by number)
E-39, (Austria) 84; [Verga] 1510—ab
R-18, [Rottino] 2005—ab
18 409, U. K., 389
PAA-701, [Bustamente y Rivero] *829
R 875, (reply) [Eddy] 91—C
Wy-1107, [Fazekas & others] *1241
CB 1348 [Wolfson & Olney] *239; [Rottino] 2005—ab
SN 6771, [Bustamente y Rivero] *829
MC-9367, [Ballstocky] 107—ab
377 C 54 [Bruce-Chwatt] 1345—ab
CONFERENCE: See also list of Societies and other Organizations at end of letter S
Committee on Graduate Training in Surgery booklet on residency programs in general surgery, 1964
CONFIDENTIAL Communications: See Privileged Communications
CONGO RED
test for amyloidosis, interval between tests, 1355
CONJUCTIVITIS
ad-noviral, Canada, 1619
due to Pseudomonas aeruginosa, treatment, 1770
unilocular granulomatous, in cat scratch disease, [Levitt] *1955
CONNOLLY, HAROLD V., Olympic hammer throwing champion with brachial plexus paralysis, [Jokl] *129
CONN'S SYNDROME: See Aldosteronism
CONSENT
to operations and other procedures, [Medicine and the Law] 65
to treat confused, uncooperative patient? 1226
CONSULTANTS
family physicians feel let down by, U. K., 90
physician and, deterioration of medical etiquette in relations between, U. K., 276
visit of, before medical installations, 77; 857
CONTRACEPTION
intrauterine pessaries, hazards of, [Wellerstein] 296—ab
sodium chloride harmful? 202
CONTRACTURE
Dupuytren's, etiology in Nigeria, [Walters] 2011—ab
Dupuytren's, hydrocortisone for, France, 1299
CONVALESCENCE
postsurgical, when does it end? [Moss & others] *322
CONVULSIONS: See also Eclampsia; Epilepsy
etiology: phenothiazine derivatives, [Fazekas & others] *1241
in children, India, 1855
pediatric contributions to neurology, [Peterman] *2161
Therapeutic: See Electric shock therapy
COOLEY'S Anemia: Trait: See Leptocytosis, hereditary
COPPER
in blood in malignant diseases, Austria, 85
COPPER—Continued
metabolism in portal cirrhosis, [Gubler] 1636—ab
sulfate iontophoresis for chromoblastomycosis, 1897
sulfate test less than 85% hemoglobin, and blood donations, 2138
COPROLITHS, [Berg] 306—ab
COR PULMONALE: See Heart hypertrophy
CORNEA
grafting program, [Ormsby] 409—ab
pathology, etiology in Riley-Day syndrome, [Liebman] 1642—ab
recurrent erosion after eye injury, 1356
CORNELL UNIVERSITY
program for hospital administrators, 1716
CORONER SYSTEM
advances made, medical examiner system to replace, 2088—E
CORPUS CALLOSUM
congenital absence of, [Slager] 631—ab
CORTEF, CORTRIL: See Hydrocortisone
F-CORTEF: See Fludrocortisone
CORTICOSTEROID HORMONES
new, Aristocort diacetate in dermatology, [Rein & others] *1821
pediatric dosage, (replies) [Trimble; and original consultant] 120
toxicity: peptic ulcer, [Kern] 1742—ab
treatment, diabetes after: etiologic relation, persistence of diabetes, 421
treatment of allergy in children, duration, effects on adrenals, 311
treatment of asthma, prolonged in children, test for food allergy in, (reply) [Engelsher] 120
treatment of chronic and protracted infectious hepatitis, (Council report) [Hanger] *1696
treatment of delirium tremens, Sweden, 1624
treatment of ichthyosis? 204; (reply) [Ewing] 2142
treatment of pemphigus, [Costello & others] *1249
treatment of peritonitis, 112
treatment of regional enteritis, limited use, [Bargen] *2045
treatment (prolonged), maintain adrenal cortical response by intermittent repository ACTH, [Young] 1208—ab
treatment status in allergy, [Bookman] *1950
use in presence of tuberculosis? 2032
CORTICOTROPIN (ACTH)
cortisone and epinephrine effects compared, India, 867
gel to evaluate adrenocortical function, [De-Filippis] 1085—ab
repository to maintain adrenal cortical responsiveness during prolonged corticoids, [Young] 1208—ab
secretion in rats under stress, India, 1986
treatment, death associated with, [Allanby] 412—ab
treatment of active chronic infectious hepatitis, [Last] 731—ab
treatment of ankylosing spondylitis, [Croft] 1643—ab
treatment of eosinophilic granuloma, bone lesions disappear, [Flosi] 2005—ab
treatment of measles encephalitis, [Allen] 1200—ab
treatment of nephrotic syndrome, [Dundon] 300—ab
treatment of periarteritis nodosa, [Johnsson] 1319—ab
treatment of trichinosis, [Brinkman] 1081—ab
treatment plus mechlorethamine for lymphoma, optic atrophy after, etiologic relationship, 2033
treatment status in allergy, [Bookman] *1950
CORTISONE
ACTH and epinephrine effects compared, India, 867
Delta-: See Prednisone
effects on water diuresis and renal function, [Raisz] 398—ab
Fludro-: See Fludrocortisone
Hydro-: See Hydrocortisone
toxicity: postoperative collapse due to adrenal insufficiency, [Slaney] 749—ab
treatment, adjuvant in pulmonary tuberculosis, [Bergsmann] 2127—ab
treatment, death associated with, [Allanby] 412—ab
treatment of active chronic infectious hepatitis, [Last] 731—ab
treatment of ankylosing spondylitis, [Croft] 1643—ab
treatment of hematologic disease, experiences with chickenpox in, [Nichols] 2233—ab
treatment of nephrotic syndrome in children, [Mateer; Danowski] 194—ab
treatment of periarteritis nodosa, [Johnsson] 1319—ab
treatment of sarcoidosis and hypercalcemia, [Koster] 1321—ab
treatment of sterility, Israel, 625
treatment of trichinosis, [Brinkman] 1081—ab
treatment plus antibacterials in Klebsiella pneumonia meningitis, [Sterkel] 710—ab

CORTISONE—Continued
treatment plus antibiotics for resistant pelvic infections, [Hurtig] 191—ab
treatment plus antibiotics in influenza, Chile, 1620
treatment plus fludrocortisone after adrenalectomy, N. Z., 180
treatment plus penicillin in syphilis, [de Graciansky] 636—ab
treatment (protected) in infantile primary tuberculosis, [Del Principe] 298—ab
vs. prednisone in rheumatoid arthritis, U. K., 182; [Medical Research Council & Nuffield Foundation] 1888—ab
CORTOGEN: **CORTONE**: See Cortisone
COSMETICS
A. M. A. Committee on, annual report, 1004
cosmetic effect of treated hemangioma, [Andrews & others] *1114
COTINAZIN: See Isoniazid
COUMADIN: See Warfarin Sodium
COUNCIL on Mental Health created, Peru, 86
COUNSELING
service on heredity at U. of Alberta, 719
COXSACKIE VIRUS
group B, type 5, acute benign pericarditis with, [Weinstein] 1495—ab
parotitis with herpangina with presence of, Canada, 623; [Howlett] 875—ab
CRAMPS
swimming, after eating: 1090
CRANIUM
base of, branchiogenic carcinoma involving, [Correa] 1325—ab
intracranial tumors, hypothermia in, [Inglis] 399—ab
CREEPING Eruption: See Larva migrans
CRETINISM
peripheral vasomotor function in, [Bower] 1883—ab
sporadic, deficiency of extrathyroid enzyme in, [Hutchison] 2017—ab
CRIME: See also Delinquency: Murder: Suicide
automatism and hypoglycemia, U. K., 1991
CROUP
pseudocroup, Sweden, 1302
CRYPTORCHISM: See Testes, undescended
CUBA
crisis, WMA help for, (Medicine at Work) [Golin] *49
CULDOSCOPY: See Douglas Pouch
CUMOPYRAN: See Cyclocumarol
CUP and lip, twin, drug promotion, [Dowling] *657: 688—E
CURARE: See Tubocurarine Chloride
CURETTAGE
routine, at delivery, [Lounsbury] 1334—ab
CUSHING'S SYNDROME
adrenal atrophy due to adrenal tumor in, [Kyle] 1344—ab
complication of prednisone and prednisolone in allergic disorders, [Bukantz & Aubuchon] *1256
screening for adrenal hyperfunction, 1514
CYANOACETIC ACID HYDRAZIDE
treatment of tuberculosis of lung, [Hecht] 410—ab
CYANOCOBALAMIN (vitamin B_{12})
Co^{60}-labeled, to differentiate macrocytic anemias and diagnose pernicious anemia and sprue in remission, hepatic uptake, [Glass] 1870—ab
effect on excretion of N_1-methyl-nicotinamide, India, 1070
radioactively labeled to diagnose pernicious anemia, [Smythe] 2223—ab
treatment of acute subdeltoid bursitis, [Kuipers] 636—ab
treatment of neuroblastoma, U. K., 90
CYCLOCUMAROL
treatment of thromboembolism evaluated, [Nelson] 186—ab
CYCLOPROPANE
transmission across placenta, [Apgar & others] *2155: 2198—E
CYCLOSERINE
toxicity in pulmonary tuberculosis, U. K., 1738
CYST
choledochal, oral cholecystography to demonstrate, [Moscley] 305—ab
thymic, in neck, [Crawford] 753—ab
CYSTIC FIBROSIS: See under Pancreas
CYSTINURIA: See Aminoaciduria
CYSTITIS: See Bladder inflammation
CYSTOCELE
rectocele and uterine prolapse with, surgical procedure for, 1355
CYTOLOGY: See Cancer, diagnosis: Cells: Lungs, cancer: Uterus Cancer

D

DBED: See Benzathine Penicillin G
DANILONE: See Phenindione
DARAPRIM: See Pyrimethamine
DEAD BODIES: See Autopsies: Medicolegal Abstracts at end of letter M under "Autopsies" and "Dead Bodies"
DEAFNESS
chronic catarrhal, relation to otosclerosis, (reptiles) [Merrill: and original consultant] 426
congenital, type of hearing test to use, 1647
in ship building industry, Finland, 86
industrial noise effect on, A. M. A. Committee to study, 1007
Nerve: See also Otosclerosis
nerve, and ocular lesions in hereditary renal disease, [Goldbloom] 1751—ab
prevention and treatment, advances in otology, [Hoople] *232
sudden, relation to atherosclerosis, [Hallberg] *1610
DEARING, W. PALMER appointed assistant director for health in Office of Defense Mobilization, 1289
DEATH
angiography after, intercoronary anastomoses in, [Vastesaeger] 2239—ab
associated with steroid hormones, [Allanby] 412—ab
cause of, arteriosclerosis, Sweden, 1624
cause of, carbutamide hypersensitivity, [Field] 412—ab
cause of, fulminating necrotic colitis after antibiotics, [Brazil] 386; [Nader] 1343—ab
cause of, glutethimide poisoning, 4 cases, [McBay] 1343—ab
cause of, in Laennec's cirrhosis, [Wallach] 1348—ab
cause of, intra-abdominal hemorrhage simulating reaction to contrast medium, [Counts & others] *1134
cause of, ochronotic nephrosis, [Cooper] 1211—ab
cause of, penicillin, test for sensitivity, [Smith] 2127—ab
cause of, postoperative pancreatitis, [Ferris] 1505—ab
cause of, slimming using dextro-amphetamine sulfate, U. K., 1303
causes, cardiac and vascular, tobacco smoking and automobile-driving stress in relation to, [Mills] 1761—ab
courtesy to relatives of dying patients, Norway, 870
of A. P. Mathews, former chairman of physiology department at U. of Chicago, 853
of Physicians: See Physicians: list of Deaths at end of letter D
postmortem homografts in extensive burns, [Davis] 402—ab
Rate: See Vital Statistics
DECORTIN: See Prednisone
DECUBITUS ulcers, 1280—E
DEFERMENT, MILITARY: See Medical Preparedness
DEGLUTITION: See Swallowing
DEHYDRATION
acute, in infants, Peru, 1990
effect on fetus of mother taking diuretic, 1517
DEHYDROGENASE
lactic in serum, to diagnose myocardial infarction, [Macdonald & Simpson] *35: (transaminase compared) [Hanson] 1315: ab: [LaDue] *1776: [Wróblewski] 2007—ab
DELESTROGEN: See Estradiol valerate
DELINQUENCY
delinquent child and family doctor, [Brickman] *339
surgery for disability helps delinquents, U. K., 1857
DELIRIUM TREMENS: See Alcoholism
DELTA-CORTEF: See Prednisolone
DELTACORTISONE: **DELTASONE**: **DELTRA**: See Prednisone
DEMENTIA PRECOX: See Schizophrenic Reactions
DEMEROL: See Meperidine
DENGUE
clinical and epidemiological observations, [Doherty] 418—ab
DENTIFRICES
revolutionary, N. Z., 1072
DENTISTS: See Medicolegal Abstracts at end of letter M
DENTISTRY
high-speed drill, N. Z., 180
procaine reactions in, 1354
prophylaxis, nurse training, N. Z., 180
radiation exposure during examination, 639
DEPENDENTS Medical Care Program: See Medicare
DERMABRASION: See Planing
DERMATITIS
Atopic: See Neurodermatitis
chrome, India, 1300
diaper rash, antiseptic for laundering diapers, 254—E: (correction) 1163
15 years' duration, diagnosis and treatment, 1897
formaldehyde, from Celeron, 642
from boron gasoline, 1356
from creaseless fabrics, Norway, 870
from shoes, differential diagnosis of cause, 641
DERMATITIS—Continued
herpetiformis, frequent in Norway, [Langeland] 892—ab
Industrial: See Industrial Dermatoses
radiodermatitis, value of troformone in, [Lelièvre] 760—ab
treatment, methylprednisolone, [Feinberg & others] *1560
venenata, allergic dermatosis, [Rostenberg] *1118
DERMATOLOGY
exhibition to be published in *Acta dermato-venereologica*, 2096
Osborne fellowship in dermal pathology, 710
radiation therapy in nuclear age, [Crossland] *647
regional group of dermatologists near Little Rock form group, Ark., 261
use of new corticosteroid in, [Rein & others] *1821
DERMATOMYOSITIS
in adolescents and children, [Everett] 1080—ab
serum transaminase in, [de Moragas & others] *1936
DERMATOPHYTOSIS
prevention, 1357
DERMATOSIS: See Skin disease
Industrial: See Industrial Dermatoses
DESENSITIZATION: See Allergy
DESOXYRIBONUCLEIC ACID
importance in constitution of genes, attempts to induce mutations, France, 1299
DEXEDRINE: See Dextro-Amphetamine Sulfate
DEXTRO-AMPHETAMINE SULFATE, U. S. P.
use in slimming, death during, U. K., 1303
DEXTRO PROPOXYPHENE HYDROCHLORIDE
codeine phosphate compared with placebos and, for pain, (reply) [Lasagna] 91—c
DIABETES MELLITUS
cataract surgery in, preoperative care, 765
classes for patients at New York Hospital, 2094
complicated by gram-negative bacteremia, [Martin] 1869—ab
complicated by pregnancy, annual report on, 1002
complicating prednisolone and prednisone therapy in allergy, [Bukantz & Aubuchon] *1256
complications: hemophilia, incidence, 914
complications: obesity, Preludin for, [Robillard] 896—ab
complications, renal, Peru, 1623
complications: sigmoidouterine fistula with diverticulitis, [Smalley & others] *827
complications: toe ulcer, treatment, 423
complications: tuberculosis of lung, antibiotics role in development, [Mattei] 734—ab
death rate, [Montenero] 1081—ab
endocrine hypo- and hyperfunction and, [Skillern] 732—ab
etiologic relation to corticosteroids, persistence of diabetes, 421
eyeground changes in children with, [Helmsius] 891—ab
glycosuria test not available, U. K., 1175
prediabetic state during pregnancy, evaluation, [Carrington] 294—ab
renal-vein thrombosis in infants of diabetic mothers, [Avery] 407—ab
severe, with remission, [Harwood] 1499—ab
treatment, sulfonylureas, (U. K.) 388: [Sugar: Craig] (mechanism of action) [Levine] 411—ab: (fatal hypersensitivity to carbutamide) [Field] 412—ab: (India) 1622: (warns against indiscriminate use, U. K.) 1735: [Walker] 2020—ab: [McKendry] 2129—ab
DIAFEN: See Diphenylpyraline Hydrochloride
DIAGNOSIS
C-reactive protein test in, [Carcassi] 2225—ab
changing status of virological diagnostic services, [Chever] *2059
diagnostic problems, (guest editorial) [Szanto] 1700—E
Georgetown U. constructs diagnostic building, 848
painful knee, drop foot, and hemoptysis, (Diagnostic Problems) [Kushner & Szanto] *2193
polyarteritis, fever, and lymphadenopathy in young man, (Diagnostic Problems) [Kushner & Szanto] *1690
DIALYSIS: See Kidneys, artificial
DIAMIDINES
aromatic, fungistatic activity, India, 1071
DIAMOX: See Acetazolamide
DIAPER
rash, antiseptic for laundering diapers, 254—E: (correction) 1163
urine ferric chloride test in diagnosis of phenylketonuria, [Centerwall] 392—C: 2219—C
DIAPHRAGM
paralysis due to ganglionic compression of phrenic nerve, France, 1299
DIASTEMATOMYELIA
diagnosis and treatment, [Perret] 750—ab
DIATHERMY
to heart muscles advised or contraindicated? 1894

V 165
1957

DIATRIZOATE SODIUM
in diagnosis of intestinal obstruction, [Epstein] *14
DIBENZYLINE: See Phenoxybenzamine
DICUMACYL: See Ethyl Biscoumacetate
DICUMAROL: See Bishydroxycoumarin
DIENCEPHALON: See also Pituitary
implantation for mental deficiency and encephalopathy, [Destunis] 2133—ab
DIET
changes after food rationing discontinued, U. K., 1075
coronary thrombosis and, hypothesis and fact, [Yudkin] 1495—ab
high-protein, high-fat, low-carbohydrate, in treating obesity, [Thorpe] *1361
Infant's: See Infants, feeding
phenylalanine-restricted, in phenylketonuria, [Horner] 299—ab
pregnancy and, U. K., 1304
Salt-Free: See Salt; Sodium
10-(3-DIETHYLAMINOPROPYL) PHENOTHIAZINE
convulsant action of, [Fazekas & others] *1241
DIETHYLSTILBESTROL
treatment plus chlorpromazine in severe mental deficiency with malignant masturbatory problems, [Geyer] 2232—ab
DIETITIAN
Army student program, 173
DIFFUSIN: See Hyaluronidase
DIGESTIVE SYSTEM: See Gastrointestinal Tract
DIGITALIS
"mixing" cardiac glycosides a sound procedure? 1898
rapid digitalization vs. quinidine for paroxysmal ventricular tachycardia, 2029
DIHYDROCODEINE
as analgesic, 428
DIHYDROSTREPTOMYCIN
toxicity combined with salicylic acid and isoniazid in tuberculosis; eczema, [Crissey & others] *1526
DIHYDROTACHYSTEROL
N. N. D., 1141
significance in therapy of tuberculosis, [Holtz] 1497—ab
DIKTYOMA: See Neuroepithelioma
DINACRIN: See Isoniazid
DIODRAST: See Iodopyracet
***d*-2:2-DIPHENYL-3-METHYL-4-MORPHOLINOBUTYRYL-PYRROLIDINE**
as analgesic, (reply) [Eddy] 91—C
DIPHENYLPYRALINE HYDROCHLORIDE
N. N. D., 1142
DIPHTHERIA
pertussis immunization with, U. K., 871
DIRT
in wounds, cleaning of, 2034
DISABILITY
bootstraps for millions, advances in rehabilitation, (Medicine at Work) [Golin] *1145
electromechanical arm slings, [Hoerner & others] *150
Industrial: See Industrial Accidents; Workmen's Compensation
old age, survivors and insurance program, 683
690—E
pharyngeal, after poliomyelitis; clinical management, [Bosma] *216
psychiatrist's role in rehabilitation, [Braceland] *211
social security program, A. M. A. Committee report, 354
surgery for, helps delinquents, U. K., 1857
2-5 years after mitral commissurotomy, clinical criteria and exercise tolerance, [Logan] 1746—ab
veterans compensation increased, 712
DISASTERS: See also Civilian Defense
training program, N. Y., 1158
DISEASE
ABO blood groups associations, ethnologic aspects of, [Buckwalter & others] *327
chronic, former long-term VA patients under vocational guidance program, 78
Chronic Illness Newsletter, annual report, 1047
chronic, research on health examinations and techniques for early detection, Pa., 1604
chronic, USPHS National Advisory Committee on Chronic Illness and Health of the Aged, 1847
effects on excretion of uropepsin, [Corazza & Myerson] *146
Nomenclature: See Terminology
oral cavity and, 159—E
Physical-Mental Relationship: See Psychosomatic Disease
somatic, in psychiatric patients, management, [Meislin] *1107
urine ferric chloride test in, 200
yaws-like, India, 1734
DISINFECTION
hand, against viruses for viral hepatitis, 641
DISULFIRAM
effects compared to Temposil in chronic alcoholism, [Smith & others] *2181
DITHIAZANINE
effective broad-spectrum anthelmintic, [Swartzwelder & others] *2063
DITUBIN: See Isoniazid
DIURESIS
effect of heparin, particularly in nephrotic syndrome, [Majoor] 1194—ab
piperoxan hydrochloride antidiuresis during normotensive phase in diagnosing pheochromocytoma, [Masson & others] *1555
sodium, from amphetamine in cirrhosis and ascites, [Wolfe] 1644—ab
water, cortisone and hydrocortisone effects on, [Raisz] 398—ab
DIURETICS
effect on fetus of mother taking, 1517
is niacin combined with ascorbic acid? 1770
mercurial, hazards of prolonged use, 1766
mercurial, treatment of heart edema resistant to, [Mellemgaard] 395—ab
urea as, U. K., 1859
DIURNAL PATTERN
physiology and pathology of, Austria, 1618
DIVERS, brain waves of, U. K., 2218
DIZZINESS: See Vertigo
DOCTORS: See Physicians
Draft Law: See Medical Preparedness
DOGS
bite, transmit infectious hepatitis? 1893
DORIDEN: See Glutethimide
DOUCHE
daily, of nose after submucous electrocoagulation and clipping of inferior turbinates for vasomotor rhinitis, 424
DOUGLAS POUCH
culdoscopy, 594 cases, [Josey] 405—ab
DRAFT: See Medical Preparedness
DRILL
dental, high-speed, N. Z., 180
DRUGS: See also "Food, Drug and Cosmetic Acts" under Medicolegal Abstracts at end of letter M
acting on sphincter of Oddi, Brazil, 719
Addiction: See also Narcotics
addiction, U. K., 181
addicts, driving licenses for? Denmark, 721
American Drug Manufacturers Association, fellowship in clinical investigation, 1607
A. M. A. Chemical Laboratory annual report, 1004
A. M. A. Council on Drugs, (list preparations with monographs) 155; (annual report) 997
ampuls, sterilization for spinal anesthesia, 2032
antituberculous, cause hirsutism or depress spermatogenesis? 909
drug fever, problem in valvular heart disease, [Ross & others] *1
DRUGS—Continued
effects on excretion of uropepsin [Corazza & Myerson] *146
F. D. A.: See Food and Drug Administration
habit-forming R 875, as analgesic, (reply) [Eddy] 91—C
hypotensive, which cause exacerbation of glaucoma? 2139
in origin of postoperative hypotension, [Barbour & Little] *1529
increased cost of, U. K., 1991
neuropharmacological agents in rehabilitation of chronic mental illness, [Ferguson] *1677
new, aids alcoholics, U. K., 1857
new and non-official, monographs of tests and assays published in *Drug Standards*, 687
new, toxic effects, U. K., 2216
poisoning in children from, U. K., 872
promotion, twixt the cup and the lip, [Dowling] *857; 688—E
research grants, 1606
samples, A. M. A. convention, 1459—E
toxicity: allergic dermatoses, [Rostenberg] *1118
toxicity: peptic ulcer, 1960—E
toxicity: reactions, enzymes and biochemical genetics, (Council report) [Motulsky] *835
toxicity, registry of adverse reactions, annual report on, 1002
treatment in infant psychiatry, Peru, 1474
USPHS neuropharmacology research center organized, 858
USPHS psychopharmacology information service, 1611
DRUNKENNESS: See Alcoholism; Medicolegal Abstracts at end of letter M
DRYNESS
of mouth and tongue in man 70, etiology, treatment, 115
DUCTUS ARTERIOSUS
patent, clinical and pathological observations in infants, [Goldring] 1203—ab
patent, infected, with massive lung infarction, [Cope] 1746—ab
DUKE UNIVERSITY
aging research grant to, 78: 263
U. S. P. H. S. research grants to, 1463
DUMPING SYNDROME
postgastrectomy, hypnosis for, [Leonard & others] *1957
DUODENUM
enzymes in infants with kwashiorkor or dystrophy, [Russo] 890—ab
intubation after cholecystectomy, Brazil, 866
obstruction due to superior mesenteric root compression, [Tyson & Keegan] *1665
pancreaticoduodenectomy for chronic relapsing pancreatitis, metabolic defects after, [Jordan] 402—ab
pancreatoduodenectomy for pancreas cancer in infant, [Becker] 744—ab
Ulcer: See Peptic Ulcer
DUPUYTREN'S Contracture: See Contracture
DUST
feldspar, risk of silicosis, 909
inhalation, harmful in inactive pulmonary tuberculosis? 2141
DYSAUTONOMIA
familial: Riley-Day syndrome, etiology of corneal pathology in, [Liebman] 1642—ab
DYSPLASIA
ectodermal, hereditary, of anhidrotic type, [Rowen] 1509—ab
polyostotic fibrous, (Fuller-Albright's syndrome), [Alfano] 1207—ab
DYSTROPHY
duodenal enzymes in infants with, [Russo] 890—ab
muscular, blood enzymes in, [Pearson] 413—ab
muscular, clinic in Texas, 851
muscular (Gowers'), in phenylketonuria with normal intelligence, [Coates] 1882—ab

DEATHS

A

Ackemann, Harry William, 1166
Adams, Texas Alexander, 1984
Adams, Eldridge Stevens, 2099
Affeld r, William Maurice, 1613
Ahlit, Charles G. C., 80
Aiken, Ralph Charles, 621
Aldrich, Walter Seward, 1613
Alford, Leland Barton, 80
Allen, James Marvin, 1613
Allen, Ralph Fred, 1069
Allen, Robert William, See: Allen, Robert Wilson
Allen, Robert Wilson, 382
Alley, Ralph Martin, 79
Allgeyer, Ernest Emile, 1850
Alter, Robert Leonhardt, 713
Ames, George Chester, 80
Amos, William Harold, 1069
Anagnos, George Dionisiou, 1167
Anderson, Alexander Campbell, 2100
Anderson, Bruce, 382
Anderson, Edgar Walker, 81
Anderson, Walter Marius, 81
Andrews, William Arthur, 382
Angus, Catherine Isabel, 81
Annis, Sumner Bryden, 1613
Antweil, Abraham, 382
Arline, Thomas J., 382
Armstrong, Edward McPherson, 2100
Arndt, Oscar H., 714
Arne, James A., 81
Arnovitz, Emanuel Morris, 175
Arntzen, Julius Leo, 1850
Aronstam, Noah E., 1850
Ashworth, Robert Fraser, 81
Atkinson, Newell Wrigley, 175
Atwater, Reginald Myers, 1982
Averill, Zelpha Walker, 622

B

Babcock, Jay Blaine, 81
Babcock, Oliver Lemont, 2100
Baber, James H., 81
Bab r, Kenneth P., 1467
Bacon, Otis Guy, 175
Baird, James Webber, 382
Baker, Bryant Orland, 622
Baker, John Walter, 1292
Ball, Peter, 861
Ball, Thomas Zopher, 382
Banks, Eldridge James, 622
Banks, Jeff, 1167
Barcroft, John Woolverton, 81
Barker, William Edward Jr., 1849
Barksdale, Elisha, 1467
Barnes, Miles William, 2100
Barnett, Spurgeon Hemperley, 622
Barnhill, John Robert, 1292
Barnwell, Columbus Hershel, 81
Barr, Richard Everett, 1167
Barringer, Paul Ernest, 861
Barron, Eleazar S. Guzman, 268
Barshay, Bernard, 622
Baskett, Roy Frederick, 175
Bass, Farris Eucstus, 81
Bates, Charles Adelbert, 1167
Bates, Willard Allen, 382
Battenfield, John Young, 1848
Baum, Albert, 1467
Bayliss, George William, 714
Beakes, Charles Henry Curtis, 1983
Beam, Eugene Cecil, 2100
Bear, Wilson Grant, 1613
Beard, James Harvey, 382
Beasley, Andrew Dumas, 1984
Beatty, Ernest Nutter, 81
Beazley, William Herbert, 382
Beckfold, Edmond, 382

Beck, Frederick George, 1069
Beck, Henry Walter, 81
Beck, Tilden Jacob, 1613
Becker, Morris R., 81
Beckman, George Edwin, 81
Beckwith, Edgar Williams, 1613
Beebe, Linn Clair, 80
Belding, Leland James, 1984
Benson, Iver Simeon, 81
Bentz, George Henry, 714
Beppler, Paul Hazen, 1850
Berg, Albert Page, 714
Bersey, Ivan Columbus, 81
Berry, Mary Ella Kirby, 861
Berson, George Jacobo, 2100
Beson, Clyde W., 1614
Bickel, John Edward, 81
Bicknore, Harold Vincent, 1466
Biggs, Ray Hoyt, 714
Biro, Louis P., 860
Bishop, Norman Leon, 1725
Biskup, Adolph Edward, 2100
Black, James Henry, 1467
Blackburn, Arthur Dale, 714
Blair, Ezekiel Slaughter, 81
Blair, William W., 80
Blake, James Roscoe, 383
Blankenhorn, Marion Arthur, 1164
Bliss, Guy Luvergne, 80
Bliss, William Everett, 2100
Block, William Henry, 1467
Blumstein, David Barnett, 714
Boaz, John Jordan, 1614
Bobb, Edward Clyde, 1467
Bockhorst, Arthur L., 81
Boddie, Julian F., 81
Boeckman, Frank Alfred, 2100
Boesel, Stephen William, 1614
Bogue, Homer Adelbert, 1167
Bond, Ellis Malcomb, 2100
Bondar, Harry Kelliher, 81
Bonvicino, Louis Anthony, 1725
Borchardt, Melvin A., 1614
Bostic, William Chivous Sr., 2100
Bottorff, David Combs, 1167
Bowman, Jacob T., 2100
Boyd, Augusto Samuel, 383
Boyer, Howard C., 1614
Boyer, Kenneth Harold, 1725
Braddock, Elmer Garfield, 2100
Brady, Charles Joseph, 57
Brady, Richard Randall, 82
Brady, Rolland Roy, 82
Brady, Thomas S., 175
Brannan, Dorsey, 1292
Branon, Anthony William, 175
Breath, Marshall Burt, 383
Breen, John, 1467
Breisacher, Carl Frederick, 2099
Breitstein, Moses Lewis, 713
Brenner, Paul Melvin, 1167
Bresky, Hillard, 714
Breslin, Robert Henry, 82
Brewster, Bert Marion, 1069
Brickell, Fred Spencer, 1984
Bridges, John H., 1167
Brier, Edward C., 1168
Brockman, James Manning, 174
Bromer, Ralph Shepherd, 1724
Brown, Harry Abed, 175
Brown, Paul, 862
Brown, William Riley, 175
Brownell, Clifford White, 175
Bruder, Victor Francis Joseph, 1613
Bruninghaus, Charles Walter, 82
Brunner, Benjamin Jr., 1850
Bryson, Roy Douglas, 862
Bubis, Jacob Louis, 381
Buchignani, Joseph Anthony, 2100
Buell, Arthur King, 2100
Bumstead, John Henry, 862
Bundy, Erwin Stillman, 175
Bunnell, Sterling, 1291
Burch, Frank Earl, 174
Burg, Fred Allan, 714
Burke, Emilie Elizabeth Mundy, 862
Burnes, Eugene Howard, 82
Burnett, Peter W., 1293
Burns, Samuel Lee, 383
Burtside, Raymond Alexander, 175
Burt, Elmer Gordon, 82
Bussell, Benjamin Randolph, 714
Buten, Edward J., 862
Buterbaugh, Howard Barbor, 1293
Butler, John Culbertson, 82
Butzow, Theodore Frederick, 82
Byl, John James, 1726

C

Cahill, John Donald, 1467
Calhoun, Hazen Albert Jr., 175
Camero, Anthony Roland, 381
Campbell, Albert James, 1850
Cantrell, Roy Foster, 1849
Caraker, Charles Tobias Jr.,176
Card, Daniel Parker, 713
Carey, Hollis Layton, 1168
Carryer, Carl Haddon, 714
Carson, James, 1467
Carter, Arthur Thompson, 1293
Carter, Charles Willard, 1984
Carter, Roscoe Owen, 383
Cartmell, Theodore Mithoff, 383
Cavallaro, Nicholas Charles, 2100
Cavanaugh, Donald Nicholas, 383
Cave, Linus Samuel, 1069
Cavell, Roscoe William, 381
Chadwick, Mary Suzanne, 176
Chaffin, Emory Franklin, 82
Chambers, Dorsey Perry, 82
Chambers, Noble Russell, 1613
Chase, Carl Clarence, 1614
Cheek, James Anthony, 1984
Chernenkoff, Peter William, 1168
Chesbrough, Phrania, 176
Chesnut, Lee, 1614
Chesnutt, James H., 176
Child, Florence Chapman, 82
Choate, Joseph Lynn, 1614
Choquette, Joseph Henry, 2100
Christenberry, Henry Eddie, 79
Christie, Ralph Franklin, 622
Christmas, George Ellsworth, 1726
Chronik, Joseph B., 176
Church, Lee O., 176
Churchill, Irving W., 2100
Ciampolini, Ettore, 176
Clapp, Hubert Barton, 2101
Clark, Carl George, 82
Clark, Coryell, 1052
Clark, Earl Finley, 176
Clark, Edward Vance, 2100
Clark, George Arthur, 1983
Clark, Lewis Duncan, 1069
Cleere, Reuel C., 82
Clements, James David, 1168
Cliff, Benjamin Franklin, 1850
Cobb, Elliott Cunningham, 176
Cocklin, William Karl, 1168
Cohen, David, 714
Cohen, Emanuel Samuel, 82
Cohen, Louis Morris, 2101
Cohen, Willi, 383
Cohn, Alfred Einstein, 380
Coleman, Clarence T., 383
Collins, Clarence Basil, 2101
Collins, Harry Otis, 2211
Collinson, Thomas W., 1614
Combacker, Leon Clinton, 2101
Comfort, Charles Williams Jr., 79
Comfort, Mansfield Whitset, 620
Cone, Andrew E., 383
Conley, Byron Richard, 82
Conolly, Joseph Bartholomew, 1467
Conrad, Clyde Kenneth, 1293
Conrad, Horace Wendell, 1850
Cook, Norman Lyle, 176
Cooke, Grady Carlyle, 176
Cooper, Robert Arthur, 1724
Cooper, Thomas Logan, 82
Copeland, N. Newall, 80
Cori, Gerty Theresa, 2099
Corlio, George Albert, 1850
Corley, Franklin Love, 2211
Correll, Sidney Robert, 2211
Corrigan, John Francis, 176
Corrington, Dale Donatus, 714
Cosgrove, John Joseph, 1168
Counts, Noah Tilden, 383
Courter, Willard Orville, 383
Cousins, James S., 1293
Covell, Walter Wallace, 1726
Cowell, Katherine Rebecca Sherk, 1467
Cox, Ernest Harper, 176
Coyle, Joseph Aquinas, 1292
Coyne, Douglas Rudrien, 176
Cramer, Ray D., 176
Craven, Lawrence Llewellyn, 1168
Crawford, Clyde Houston, 176
Crawford, Lewis E., 82
Cretzmeyer, Charles Henry, 82
Crispo, Pierre Timothy, 714
Cronkite, Alfred Eugene, 1983
Crossley, Samuel Wallace, 1383
Crow, Hubert Dinwiddie, 381
Crow, Marvin Bruce, 1726
Culligan, John Maurice, 1068
Cummings, Claude Wiggins, 82
Cunningham, Joseph Alexander, 2211
Curry, Lewis Allison, 1293
Cutler, Jacob W., 1612
Cutler, John Calvin, 2211

D

D'Angelo, Benedetto Francis, 2211
Dady, Elmer Eugene, 1851
Dalpe, William Guy, 1293
Daniel, James Wallace, 176
Daniel, Joseph S., 383
Daniels, Frank Marion Jr., 176
Darnall, Robert Madison, 2101
Darrah, Leon Calvin, 1614
Darrow, Clarence Allison, 1614
Davies, John James, 1165
Davis, Arthur Osmon, 1724
Davis, George Monroe, 2211
Davis, Hugh, 1168
Davis, Warren Maynard, 383
Deaver, Clyde Wilson, 1293
de Brun, Harry Carl W. Schultz, 383
De Buys, Laurence Richard, 267
DeFeo, Amadeo Joseph, 383
Defnet, Harry John, 2211
De Jarnette, Joseph S., 1467
De Kleine, William, 1164
Delagoa, Arthur Clark, 714
Delehanty, Edward Thomas, 1468
Deming, Horatio S., 1468
Dempsey, Robert Bowne, 383
Denham, Thomas William, 714
Deskins, J. Tilden, 383
Desprez, Louis Willoughby, 1168
Deutschman, David, 2101
DeVighne, Harry Carlos, 1068
Dewis, John William, 2211
DeWitt, Charles B., 383
Diasio, Fortunato Anthony, 1613
Dichter, Irving Samuel, 1168
Dickel, William John, 2101
Dieckmann, William Joseph, 860
Dierksheide, Henry William, 1168
Dietel, Frederick William, 2211
Dillon, Albert Le Roy, 1614
Dimlich, H. Earl, 1726
Dingman, Harold Williamson, 1850
Dinsmore, Robert Scott, 1849
Dodson, Hobart W., 862
Dolloway, L. Marshall, 1984
Donath, Lawrence Herbert, 862
Donker, Adrian Edward, 714
Donohue, James J., 1725
Donley, Frank Maxwell, 383
Doolittle, George Miles, 381
Dora, Alexander Joseph, 1168
Dorr, Henry Bryan, 2211
Dotson, Malarthar, 2101
Douglass, Alvin E., 862
Doyle, Chauncey Jay, 1468
Doyle, Helen MacKnight, 381
Doyle, Joseph Lamar, 1969
Draesel, William Albert, 1611
Drake, A. H. Boyer, 1293
Draper, Walter E., 381
Dreunen, Earle, 381
Driscoll, Simon Eugene, 268
Drummond, Clarence Coombs, 1851
Du Bose, James Lafayette, 1168
Dunkel, George Kasper, 1726
Durham, Robert Blakely, 1984
Dutton, Benjamin Blanton, 1168

E

Eagle, Arthur Bruce, 382
Eaton, Adalieta Shaw, 1069
Eblen, James Gilbert, 1291
Eder, Howard Leslie, 381
Edmunds, Clarence Harold, 1168
Edmundson, Susan Offutt, 384
Edwards, John Wesley, 1981
Egan, James Henry, 2211
Ehinger, Wilbur Roland, 2211
Ehlert, Edwin Henry, 2211
Ehrhardt, William, 1168
Eisenstadt, Joseph Spiro, 2101
Elder, James Franklin, 2101
Ellenberg, Samuel Lawrence, 1293
Ellis, Edward Forrest, 860
Elsner, Laurence William, 1726
Ely, Donald, 381
Emerson, William Joseph, 714
Enfield, Thomas Walter, 1468
England, Albert Charles, 2211
Engle, David Edsel, 1983
English, Kinsey Ourant, 714
Eppstein, Ralph Morris, 1468
Erickson, Arvid Waldemar, 268
Erwin, Harlan Lamar, 2212
Eskridge, Frank Lewis, 2212
Estes, Florella, 1614
Eveleth, George S., 714

F

Faherty, John Charles, 1726
Faimer, Emanuel Montague, 2212
Familton, R. Spencer, 1168
Farmer, Frank Albert, 2212
Farnham, Waldo Clay, 622
Farrage, James H., 622
Farthing, J. Watts, 862
Faver, Henry Merrell, 381
Feher, Alexander, 1466
Feldman, Samuel, 1069
Ferris, Eugene Beverly, 1466
Fetner, Lawrence Merrill, 1614
Finady, William Aaron, 82
Finney, Roy Pelham, 1614
Fir stone, Abraham, 268
Fischl, Jacques Ruderfer, 381
Fitzgerald, Orville Moyer, 1983
Fitzgibbon, John Harold, 620
Fitzgibbon, Thomas Grattan, 268
Flagler, Harold Brodhead, 1984
Fleck, Roland Friederick, 1468
Fleming, Patrick Joseph, 381
Flentje, Robert, 381
Florath, Otto Phillip, 2212
Flowers, William Knox, 1614
Floyd, Hayden Greene, 1984
Flynn, Raymond A., 1614
Folger, Glen Keith, 2099
Forman, Alfred H., 1168
Forrest, James Finley, 862
Fortin, Philip Frederick, 1614
Foster, Samuel Thomas, 268
Foster, Wayne John, 1293
Foster, William L., 1726
Fox, Gilbert Graham, 2212
Frank, Jacob William, 1851
Fraser, Samuel, 1851
French, Sanford Williams, 1612
Friedberger, Joseph, 1168
Friedrich, Louis M., 2212
Frieman, Israel, 1726
Fuller, Martin Luther, 715
Fuller, Muriel, 1614
Furby, Robert Ludwick, 715
Fuson, Carl Campbell, 715

G

Gackenheimer, Charles Darwin, 2212
Gaige, Elmer M., 1615
Galloway, Fletcher Wilson, 715
Gambee, Louis Phaon, 1466
Ganser, William J., 1615
Garber, Jerry M., 1851
Gardner, Murray MacGregor, 2101
Garner, Albert F., 1168
Garr, Charles Maxwell, 383
Garrison, Amos Rule, 82
Gates, George Roy, 1726
Gaume, Harry W., 384
Gearhart, Alonzo Pitt, 1615
Geibel, Frank Baum Clayton, 1292
Geiger, Hugh St. Clair, 269
Geldert, Maurice Wesley Jr., 1069
Gentles, Henry Wernicke, 1293
Genung, Mabel Amanda, 1468
Gerald, Herbert Franklin, 2099
Gernhard, William Ernest, 1615
Gevurtz, William Sanders, 269
Gibson, Edward Fred, 1293
Gibson, Lee K., 1615
Gilbert, Robert Samuel, 384
Gilcher, Frederic Charles, 269
Gilles, Raymond Barkin, 1293
Gillespie, Charles Elverton, 1851
Gilliland, Alvin Orrin, 715
Gilsdorf, Walter Henry, 1984
Ginsburg, Samuel, 1615
Glasgow, Robert S., 1468
Glasscock, John Frederick, 269
Glatfelter, Harvey Edward, 1468
Goldberg, William Henry, 1615
Goodwin, Clinton Eddy, 1615
Gordon, Elisha Smoot, 2212
Gottschalk, Clara Grace, 715
Goulding, Timothy Francis, 1726
Goulet, Leo Joseph, 1615
Gowen, Thomas Francis, 2212
Grala, William Leon, 384
Granger, Arthur Stanley, 1168
Grant, Leon Joseph, 1293
Gravem, Knute Larsen Jr., 1726
Gray, Gordon Robert, 1293
Green, Dwight Munro, 1293
Green, Lewis H., 1615
Greene, Clarence Sumner, 1849
Griffin, Frank Leo, 1984
Griffin, James Burnie, 269
Griffin, Thomas Robbins, 269
Griswold, Walter Stanley, 1726
Grodin, Herman Wolmer, 1293
Groth, William F., 1615
Grundset, Ole J., 715
Guernsey, Paul Francis, 1468
Guerra, John Dante, 1726
Guilbert, Gerald Dildra, 1294
Gulick, Arthur Cornelius, 384
Gummess, Karl Chester, 2212
Gunz, Abraham Nathan, 1851
Gurvitch, Samuel Max, 1615
Guy, Robin Jefferson, 622

H

Haberman, Charles P., 1294
Haibrook, John Franklin, 715
Hale, Benjamin Franklin, 1294
Haley, Elliott Clarke, 1615
Hall, George Washington, 862
Hall, Henry Francis, 82
Hall, James Roland, 862
Hallock, Roscoe Scott, 269
Hancock, Forrest Dunlap, 1294
Hand, Patrick James, 862
Hanford, Peter Oliver, 2212
Hankins, Frances Cantrall, 83
Hardy, Hugh Winfred, 384
Hargeus, Charles William, 1168
Harms, Frank Henry, 1726
Harper, William Glen, 1292

V 165
1957

Harrelson, Rose Cranse Jr., 83
Harrington, John Jay, 269
Harris, Aaron, 1615
Harris, Grove Walton, 384
Harris, Marcus Lafayette, 862
Harsha, Gene Melford, 384
Hart, Raymond Lochary, 862
Hartenstein, Albert G., 384
Harter, Harry Morton, 1612
Hartman, William Michael, 2101
Hartwell, John Bryant, 384
Hassett, Florence Sullivan, 713
Hasting, William Edward, 2212
Hatcher, Dock Thomas Jr., 1615
Hatcher, Martin Armstead, 83
Hatfield, David Davis, 269
Hauenstein, Barton Ferris, 1166
Hawkins, Andrew Peter, 862
Hawks, Edwin Andrew Jr., 622
Hawley, Sydney James, 713
Hayes, Henry Homer, 1468
Hayes, Maurice Augustine, 384
Hazeltine, Harry Hobart, 384
Head, Robert William, 269
Heald, Charles Wesley, 1294
Healey, Thomas Vincent, 1468
Helgeson, Carl John Edward, 1726
Heller, Abraham Gerald, 1615
Helwig, Edward C., 385
Hennel, Herman, 83
Henrichsen, Karl Johan, 1615
Herndon, Jesse Harmon, 1984
Herron, Allen Leonard, 1984
Hersohn, William Wolfe, 622
Hetherick, Robert Hynton, 1724
Hetzel, Clarence Charles, 1068
Hewitt, Leland Victor, 385
Heyerdale, Oscar C., 862
Higgins, Spencer Littlefield, 1294
Higgins, William Harrison, 79
Hill, Joshua Moses, 1294
Hill, Robert Henry, 80
Hill, Sara S. Marquam, 1984
Hiller, John P., 385
Hines, Sidney Jurry Truley, 1468
Hitschmann, Edward E., 862
Hodge, Otto Phillip, 1615
Hodges, Willis Holland, 2101
Hodgkins, Albert E., 862
Hoeven, Edward Benjamin, 2212
Hoffer, James Jacob, 385
Hoke, Clarence Calvin, 1292
Holland, Lewis Benedict, 1294
Holm, Augustus, 1851
Holmes, Andrew Byron, 1851
Holt, Janette Louise, 1615
Holtzhausser, George J., 83
Holz, Rudolf, 1616
Hooker, Rufus Walker, 2212
Hooks, James Moore, 1613
Hopkins, Edward Kimball, 1616
Hopkins, Miles, 1616
Hopkins, Porter W., 1294
Hopkins, Richard Thomas, 715
Hopson, George, 715
Horneff, Joseph Arthur, 1726
Horrax, Gilbert, 1848
Horsley, Henry Lee, 1168
Horst, Walter William, 1292
Horton, Childs Clinton, 269
Hosman, Fred Leo, 1069
Houghton, Guy Swinburne, 1294
Houser, William A., 269
Houston, Donald McClure, 863
Howell, Harriett, 622
Hoyt, Awra Andrews, 2101
Hubbs, Andrew Dunsmore, 1984
Huffman, Albert Dale, 862
Hughes, Orlando Greeley, 1294
Humbert, Walter Cowden, 1292
Hummer, Harry Reid, 1616
Husik, Jacob A., 1616
Hutchfield, John, 1726
Hutchinson, Alfred Dunbar, 382
Hutchinson, James Thomas, 83

I

Iden, John Hooe, 1616
Infield, Gerald Lee, 715
Inge, James Tunstall, 2212
Irvine, Eugene Judson, 2101
Ivanov, Christine Jan, 715
Iwiansky, Nathan, 2213

J

Jackson, Julien Dabney, 1069
James, Henry, 382
Jaques, Jennie Eugenia, 1294
Jastram, Alfred Henry, 385
Jellis, Walter, 83
Jenkins, Paul Butler, 269
Jennings, Francis Bates, 1616
Jenson, James Lloyd, 1294
Jesberg, Simon, 79
Jobson, William Russell, 1726
Johnson, Detlof Emmanuel, 269
Johnson, Harry Z., 1616
Johnson, Hobart Clemens, 1068
Johnson, John Alexander, 1069
Jones, Lafon, 1984
Jones, Wellington West, 1616
Joyce, Edward, 385
Judy, John Abram, 1726
Junkin, Samuel Presley, 1468

K

Kallenberg, Henry Frederick, 385
Kalson, Abraham Maurice, 269
Kane, Robert Leonidas, 269
Kauffmann, Louis John, 83
Kay, Edward Walter, 1294
Kayne, Nathan M., 2101
Keator, Louise Helmka, 1616
Keely, Henry Edgar, 1616
Keenan, Maurice Edward, 715
Keever, Kenneth William, 1851
Kell, Frank Conrad, 1849
Kell, Peter Augustus, 1851
Keller, Daniel Casteel, 1851
Kelley, Paul Joseph, 1069
Kelly, William Monroe, 269
Kelsall, Oliver Holt, 1616
Kendall, Eugene Lurell, 385
Kendig, Jerome Stauffer, 1616
Kennedy, Herbert Bradley, 1468
Kindleberger, Charles Poor, 1851
King, Marlon Norwood, 1616
Kinnaman, Clarence Horace, 385
Kirk, John William, 2101
Kistler, Edwin Cloyd, 1294
Klar, Jacob Joseph, 715
Klein, Samuel Moses, 863
Kleinberg, Samuel, 1291
Klieger, Samuel J., 1727
Klock, Egbert LeRoy, 863
Knisely, Alan DeGrief, 1294
Knott, Howard James, 385
Knowles, Henry L., 269
Knudson, Frank Benjamin, 1616
Kobrak, Heinrich Franz Guenther, 1982
Kvetalek, Michael John, 1616
Kolouch, Frederick George, 2213
Koskela, Albert Leo, 83
Krakowski, Julian Peter, 1851
Krape, Joseph Harmen, 1616
Kremser, Valentine Charles, 863
Kroener, William Frederick Sr., 715
Kronick, Macey, 1294
Kruk, George Joseph, 1616
Kuhl, Augustus Bernard, 1468
Kunz, York, 385
Kutnewsky, John Knox, 269
Kvitrud, Gilbert, 269

L

Laird, James Alexander, 2213
Lanchner, Abraham Joseph, 2101
Lane, Abraham, 1617
Lane, Burl Benjamin Jr., 1727
Lang, Valorus Frederick, 861
Langlois, William Edward, 270
Lapp, Henry Clarence, 270
Largay, Arthur Owen, 863
Larner, Arthur Leo, 863
LaRocca, Henry Andrew, 1069
Larocbe, Armand, 622
Larsen, Reuben Leonard, 79
Lavine, George Robert, 1851
Lawrence, Frederic Mortimer, 270
Lazansky, Joseph Peter, 1294
Leach, Charles Daniel, 1617
Leary, Maurice Thomas, 83
Leavell, George Walne, 1294
Leavitt, Harry Clayton, 83
Lee, George Francis, 270
Leiser, Rudolf, 1166
Lemoine, Albert Napoleon Sr., 1291
Lenthall, Theresa Ulla, 1468
Leonard, Clyde Archie, 1617
Leopold, Francis D., 385
Leopold, Raymond Sylvester, 83
Leopold, Simon Stein, 268
Lerner, Lelbe Wolfe, 863
Lesem, Alexander Marx, 622
Lesses, Max, 83
Leto, Carmelo, 1468
Levy, Lewis Harris, 1851
Lewin, Norbert, 385
Lewis, Claud, 385
Lewis, Joseph Davidson, 381
Liebt, Louis Frederick, 1169
Licks, Frederick Charles, 1984
Lieberman, Louis James, 715
Lillie, Harold Irving, 859
Linn, Wilbur N., 1851
Lipkin, Harry, 715
Lipson, Jerome, 1295
Lisbon, Wallace, 1295
Lischer, Robert Franklin, 270
Lockwood, Ira Hiram, 621
Loftus, Michael Emmet, 622
Long, Charles Eugene, 1295
Long, Margaret, 1617
Longshore, Walter Eugene Jr., 1467
Loomis, Ralph Henry, 385
Lord, George Hammond, 1617
Loumos, Sarantos Constantine, 1617
Lowrey, John McPherson, 1851
Lowrey, Lawson Gentry, 859
Luckhardt, Arno Benedict, 1848
Luessman, Harold William, 1468
Lurting, Clarence Wilbur, 715
Lussky, Herbert Otto, 1617
Lynch, Daniel Webster, 715
Lynch, Frederick James, 381
Lyons, Carmine Keith, 1852

M

McBride, James Thomas, 2213
McBryde, Stewart, 270
McBurney, George Franklin, 1469
McCalip, William Davis, 270
McCall, William K., 1852
McCartin, John Edward, 622
McConkie, Willis Leslie, 1617
McConnell, Charles Asa, 1469
McCooey, Daniel F., 863
McCoy, Walter Reynolds, 1469
McCullough, George Edwards, 1295
McCurdey, Neil Augustus, 715
McCutcheon, Merle D'Aubigne, 270
McDaniel, M. T., 1617
McDermott, Joseph Anthony, 1852
McDonald, William Joseph, 1852
McEnerney, Charles Harold, 1724
McEntee, Edward James, 270
McEwan, John Singer, 1725
McFarland, George Edwin, 83
McGirr, Felix Francis, 1617
McGuire, Roy Alvin, 622
McHale, Joseph John, 863
Macklin, M. Charles, 715
McKinney, Mark Ward, 1469
McKinney, Philip Edward, 1169
McKnight, Chester Howard, 1295
McLean, Alexander David, 1852
MacLean, John Arthur Jr., 1725
McMann, William Henry, 715
McNair, Charles Francis, 1295
McNaughton, James Harvey, 1727
McNeel, John Osborne, 270
McNeill, Clyde, 1466
McNulty, John Benjamin, 715
Magruder, Levin Wales, 1617
Mahoney, John Francis, 385
Maisel, Irving, 1165
Malley, George Calvert, 83
Mallison, Samuel Neal, 2101
Malloy, Henry Darius, 716
Manahan, Herbert Wellington, 1727
Mankovich, Eugene, 1469
Mann, Sidney Louis, 1727
Marble, Perley Leonidas, 716
Marcus, Samuel Jerome, 716
Marden, Wilmot Leighton, 1617
Markley, Josiah Preston, 270
Marks, Julian Barnett, 83
Maroun, Sam Zacharia, 382
Marsh, Ina Alexandria, 2213
Martin, Cecil Edward, 270
Martin, Roy David, 270
Martin, Ruben Ferdinand, 83
Martinson, Martin M., 2213
Martyn, George, 270
Mason, Mary Taylor, 863
Mason, Stella M. 2213
Massey, Warren Eugene, 1727
Mast, Wesley H., 2102
Matas, Rudolph, 859
Matheis, Henry August, 2102
Mattox, Edgar Ellsworth, 1069
May, Francis Albert, 1167
Mayer, Benjamin Harrison, 716
Mears, Robert Fuller, 1469
Meharg, Shelton Theodore, 83
Meiner, Joseph Aaron, 1852
Mellen, Dan, 1612
Mellen, Richard Hager, 80
Melvin, Alexis Merritt, 270
Menkel, Herman Carl, 270
Mercer, Eugene LeRoy, 270
Merrill, George Adams, 1850
Merschimer, Christian Henry, 2102
Messer, George Frederick, 716
Meyer, Louis A. T., 1295
Micklethwait, Oscar Richard, 863
Mikesch, William Henry, 716
Miller, Frank Henry, 2102
Miller, Henry Blackburn, 1727
Miller, H. Edward, 863
Milligan, Edd Fitch, 83
Minassian, Harootune Avedis, 270
Mirviss, Sophia, 2102
Mitchell, Carl Randolph, 1295
Mitchell, Paul Hayne, 716
Mokrohisky, Stephen Michael, 1727
Mondloch, Joseph Lorin, 1727
Moore, Ammon Cabler, 1727
Moore, Donald Bernard, 2102
Moore, George W., 716
Moore, James H. 1727
Moore, Jesse McGough, 716
Moore, Joseph Leslie, 716
Moore, Merrill, 1164
Moore, Moore Sr., 270
Moore, Robert W., 83
Moore, William Thompson, 1727
Moorhead, John Joseph, 79
Moran, Robert Edward, 1727
Moras, Edmond Raymond, 863
Morewitz, Thomas David, 2102
Morgan, Hiram Burnard, 1295
Morgan, Theron Harvard, 2102
Morris, Earl Herbert, 1169
Morris, Isaac Cahal, 863
Morrish, Ray Sells, 1068
Morrison, Charles R., 1617
Morse, Charles Frederick, 268
Morse, Charles L., 1295
Morse, Edward Clarke, 1727
Morse, Samuel, 385
Moss, William Lorenzo, 1068
Mottola, Samuel John, 1727
Moyer, Isaiah Landis, 1727
Moyer, Rita Slater, 863
Mueller, Clive Paul, 716
Mundy, James Oscar Jr., 1727
Murphy, Edgar Watson, 270
Murphy, Leo Thomas, 1469
Murphy, Lyman Clements, 2213
Murray, Alexander, 621
Mutch, Albert, 2102
Myers, David Ap, 1724
Myers, Edmund, 1469
Myers, Henry F., 716
Myles, Leo Thomas, 1852

N

Nacrelli, Vincent Anthony, 1469
Nagle, Frank Orthmer, 1295
Nagle, Patrick Sarsfield, 1166
Nark, John Aloysius, 716
Nash, Edward Myron, 1617
Naughton, John Philip, 1069
Nelson, Henry John, 1295
Nelson, Oliver Otto, 2102
Newbury, Nelson Edwards, 716
Niebergall, Mary Raymond Gould, 1295
Niederwimer, John Stevens, 716
Noble, Lyman Adams, 1295
Nothins, Louis Adolph, 716
Noyz, Frederick George, 267
Noyes, Ira Hart, 1166
Noyes, William Wallace, 1169
Nulton, Ida May, 716

O

Oatman, Clyde Danford, 1167
O'Bar, Oliver, 716
O'Brien, James William, 1852
O'Connor, Francis Edward, 1613
Ogden, Lynden, 1727
O'Kelley, Frank Merconey, 1728
Olds, William Henry, 861
Olson, Olof Adolphus, 1295
Olson, William Paul, 176
Omin, M. Robert, 1728
O'Neill, Edward Daniel, 716
Oram, Joseph Hubbard, 1166
Orff, John Henry, 1295
Orton, Henry Boylan, 1291
Osborn, Alfred Shaffer, 716
Osborn, John Ernest, 860
Ostrom, Louis, 1292
Otchin, Charles Emanuel, 2102
Ovitz, John William, 1728

P

Pacella, Emilio Robert, 1169
Pachanan, Sumpat Kevork, 1295
Packard, Lawrence Ralph, 176
Pacyna, Victor, 2102
Pagel, Max Manfred, 2102
Painter, Samuel Goodall, 1295
Parker, Clarence Avery, 1728
Parker, James Searcy, 1169
Parker, Samuel Thomas, 270
Parsons, Frederick William, 174
Patten, Elmer Eugene, 2213
Patterson, Malcolm Richard, 1295
Pearson, George Burton, 1168
Peel, George Talbot, 1296
Peeler, Clarence N., 1467
Peisker, Jacob Herman, 1296
Penke, Madeline, 1169
Pennington, Henry Z., 717
Perry, Richard Wilbert, 271
Perry, Robert Edward, 176
Peters, Augustus W., 2213
Pfister, Faris Fred, 863
Phaneuf, Josephat Stanislas Policarp, 177
Pharr, Lucius P., 2213
Phillips, Walter Franklin, 1728

Pierce, Clarence Dexter, 1169
Pinson, Jacob David, 177
Plank, Tilman Howard, 2102
Pleasants, Jacob Hall, 1165
Polrier, Ralph Alexander, 1852
Poleshuck, Rubin, 1169
Porter, George R., 177
Porter, Richard Carney, 2213
Porterfield, William Lowrie, 717
Powell, Eli, 1617
Power, Howard Anderson, 1613
Powers, Herbert William, 1982
Prager, Leo, 2213
Prendergast, John Joseph, 1725
Prentiss, Daniel Webster, 2213
Price, Alfred Stirgus, 717
Price, Charles Wesley, 864
Price, Cleveland Jackson, 2102
Price, John Evan, 1296
Price, William Harrison, 717
Proctor, Benona Jones, 177
Pruitt, Marion Columbus, 621
Puckett, Carl, 1850
Purdy, John W., 2213
Pyle, Jesse N., 271

Q

Quay, William Hendricks, 621
Quinn, Abram Turner, 1296

R

Rabinoff, Sophie, 1849
Raibourn, Richard Lorenzo, 864
Raihala, John, 1469
Rainey, Louise G., 271
Rainsford, Laurence Frederick, 177
Ramage, Chesney Macauley, 717
Ramspacher, Theodore Frank, 1728
Rankin, Claude Bernard, 271
Ranney, Thomas Pollock, 1296
Rathman, Omer Charles, 717
Ratigan, Carl St. Clair, 2213
Ratner, Bret, 1982
Rayman, Elias Allie, 1169
Raynolds, Elmer L., 717
Read, Sir Charles, 619
Rees, Kendall Brooks, 717
Reeves, James Aul, 1983
Reiff, Melville Newton, 864
Reineke, George F., 271
Reinherz, George, 1169
Reisman, Samuel Charles, 1617
Reiss, Alexander, 864
Reitzel, Claude Everett, 177
Rejent, Anthony Joseph, 271
Remillard, Joseph Laury, 717
Replogle, Edward Garrie, 2213
Resek, Felix, 2213
Reutinger, Ernest Victor, 1169
Reynolds, Albert C., 1296
Reynolds, Roy Rex, 1296
Rhett, Wythe Munford, 1728
Rhodes, Robert E. Lee, 1469
Rhudy, George Garland, 177
Rice, Edgar Eugene, 1852
Richards, Charles Maynard, 1296
Richardson, David Phillip, 864
Richman, Barash, 717
Riordan, Timothy Joseph, 1849
Risser, Arthur Strohm, 561
Ritchie, Douglas William, 864
Ritter, Richard Clinton, 1728
Roach, Richard Aloysius, 271
Robb, Winifred Arene Yelton, 864
Robertson, Roy Lamar, 80
Robinson, Charles Irwin, 271
Rodenberg, Albert Henry, 1852
Romano, Anthony Mario, 864
Roper, Charles Pinckney, 1728
Rosenfeld, Morris, 1728
Ross, Alonzo Alverly, 1850
Ross, George Perry, 1169
Ross, Horace B., 177
Ross, Howard Albertus, 177
Ross, Jesse Ellick, 1169
Roth, Irving R., 177
Rothkugel, Paul R., 177
Rourke, Charles Fayette, 1725
Rouse, Benjamin H., 177
Rupin, Anton, 864
Russell, Murch, 864
Russell, Thomas J., 271
Ryan, Frank Kevan, 713
Ryan, Linus Martin, 1613

S

Sabla, Daniel Joseph, 864
Salley, Fitzhugh Prothero, 1728
Salvin, Monte, 177
Samuels, John Goodwin, 717
Samuelson, Samuel, 1617
Sandy, William Charles, 1612
Santoro, Anthony, 864
Sarkis, Eleazer Der, 864
Saunders, Edward Watts, 864
Savedoff, William M., 717
Sawabini, Elias J. B., 1728
Schaefer, Otto, 717
Schatz, Francis John, 271
Scheffer, Carl Julius, 717
Schermann, Albert H., 1728
Schneider, Carl Oscar, 385
Schoenfeld, Phillip, 1169
Schrade, Joseph Patrick, 271
Schwab, Frederick, 717
Schwabland, William Tecumseh, 177
Schwartz, Abraham S., 271
Scott, Roy Wesley, 1165
Seidenstein, Jacob Joseph, 1469
Shack, David N., 177
Shafer, Frank Myron, 865
Shanks, Joseph, 1728
Shannon, Hervey Linwood, 1296
Shapiro, Robert, 177
Sharon, Isaac Paul, 717
Shaver, William Trantham, 622
Shaw, Arthur John, 717
Shea, William Edward, 177
Sheppard, John Hunt, 1728
Sherman, Elvie Clyde, 865
Sherwood, George Edward, 271
Shirley, Carl Wilson, 717
Shirley, R. V., 1982
Shore, John Paul Jones, 865
Sibley, Charles T., 1469
Sidener, Thomas Taylor, 717
Sierakowski, Chester Steven, 717
Sikes, Gibson L., 865
Silver, H. Fletcher, 271
Simmons, Walter Elliott, 1296
Simon, Arthur R., 80
Simons, Samuel Shirk, 865
Sisson, Sanford S., 177
Sivertsen, Andrew, 271
Skwor, Charles James, 271
Smith, Annie Thompson, 1728
Smith, Chiron Waterville, 1296
Smith, E. Florence Stir, 177
Smith, Edward Joseph, 2102
Smith, Ferris, 1165
Smith, Homer R., 1169
Smith, James Bathurst Jr., 271
Smith, James Laurence, 1469
Smith, Jesse T., 718
Smith, John Sam, 1166
Smith, Lewis Albert, 864
Smith, Paul White, 1296
Smith, Roy Kenneth, 861
Smith, Scott Lord, 861
Snow, Albert Granville, 1728
Snyder, Samuel, 1728
Sogge, Ludwig L., 271
Sohler, Theodore Paul, 621
Sophian, Abraham, 1850
Spengler, Frank B., 718
Spigler, James Frederic, 1725
Spooner, Dostor Sterling, 865
Sprague, Buell H., 718
Spreng, Elizabeth Partridge Dial, 1728
Spurlock, George Herschel, 1728
Stanton, Frank Everett Sr., 865
Starnes, Adolphus E., 1729
Stauffacher, Charles John, 1852
Steinfuehrer, Gotthold, 718
Stennis, James H., 177
Stephenson, Benjamin A. Swift, 1296
Stern, Louis Henry, 1729
Stewart, Donald Leonidas, 1852
Stewart, Paul Morton, 1169
Stewart, Vida Odessa, 177
Stewart, Winifred Bayard, 1165
Stone, John Boyd, 718
Storey, Charles Arthur, 271
Stormont, Riley McMillan, 561
Stotter, Arthur Lesley, 1729
Strachauer, Arthur Clarence, 1467
Stratford, Eldredge Wayne, 865
Stratton, John Newton, 271
Streep, Isaac Newton, 1170
Strickler, Mary E. Ranson, 177
Stuart, William Charles, 1296
Sughrue, Dennis Francis, 865
Sullivan, Arthur George, 1729
Sullivan, James Aloysius, 865
Surbaugh, Ross Dairrel, 1469
Sutton, Jack, 1729
Svec, Floyd Alfred, 271
Swan, George Forney, 1852
Sweet, Clifford Daniel, 1983
Swenson, Leonard Carl, 718
Swindle, Robert Norris, 865
Swingle, Alvin Jacob, 865

T

Tallman, John Harold, 1170
Taylor, Asa Porter, 1729
Taylor, Jay Richard, 271
Taylor, John Edwin Marvin, 271
Taylor, Septimus Theodore, 272
Teleky, Ludwig, 1165
Terry, Elmer Clayton, 272
Teskey, Stanley, 1170
Thomas, Charles Everett, 1852
Thomas, George Elwin, 718
Thomas, John Stephen, 2102
Thomas, Joseph Turner, 272
Thomas, Merrick Dowdell, 718
Thompson, Albert Ely, 865
Thompson, Elmer James, 1170
Thompson, Leland Alexander, 272
Thompson, Paul Francis, 1729
Thompson, Penrose Hann, 865
Thomson, William, 1852
Thornton, Lawson, 175
Timberlake, Baxter Hall, 1725
Tinsley, Will Houston, 272
Tonney, Frederick Oscar, 174
Treglown, Llewellyn Henry, 272
Trigg, Franklin Elem, 718
Trimble, Staunton, 272
Tulgan, Joseph, 1469
Tune, Walter Otis, 1170
Turkel, Henry Lewis, 1852
Turman, George Fugett, 718
Turner, Clifton Sherwood, 718
Turner, Ewing Lee, 861
Turner, Irvine Friend Peddle, 1170
Turner, Wylie Erasmus Jr., 718
Tyson, Thomas D., 1170

U

Uhlemeyer, Henry Adolph, 1469
Urberg, Sofus Emanuel, 1296
Urkov, Joseph Conrad, 1729

V

Vail, William Penn, 272
Valentine, Richard Ellis, 272
Van Allen, John Peter, 865
van Allen, William Roy, 865
Vander Laan, John Edwin, 1852
Van Fleet, Harry Darwin, 1729
Van Leuven, Buell Hitchcock, 175
Van Metre, Richard Thompson, 272
Van Sandt, James William, 1984
Van Vleet, Mary Elizabeth, 865
Vass, Rufus Samuel, 272
Veasey, Clarence Archibald, 1166
Veazey, William M., 1729
Veech, Annie S., 718
Visanska, Samuel A., 272
Voigt, Charles Bernard, 1725
Vonderbeck, John, 865
Von Tobel, Albert Eugene, 1176
Vosburg, Walter Hall, 865

W

Waddington, Wayne Stanley, 1729
Wade, John Hubert, 1296
Wagner, Joseph Adam, 1170
Wagoner, George, 1167
Wakeman, Charles Leonard, 865
Waldrep, Newman Cayce, 1170
Walker, Byron Porter, 1296
Walker, Duncan De Vane, 1296
Walker, Joseph J., 1852
Walker, Robert Nichols, 1170
Wallace, Andrew Lee, 1469
Wallace, Frank Barnett, 1170
Wallace, James Carroll, 1170
Wallace, Robert Pulley, 2102
Warren, Frank Riendl, 1170
Warshaw, Samuel Abraham, 1166
Wasilewski, Joseph Thomas, 718
Watkins, Barton Hiram, 1469
Weaver, David Elbert, 1296
Webb, Enoch Palmer, 718
Webb, Roscoe Clayton, 1164
Webb, Walter Duval, 174
Weber, William Donald, 718
Wedemeyer, Marlin Richard, 860
Weeks, Joseph Clayton Jr., 272
Weir, William Carrigan, 1170
Weissman, Max, 1467
Weitzel, William Forrest, 272
Wellard, Henry Carruthers, 1617
Wenner, Henry Lee, 1729
Werelius, Axel F. W., 861
West, William Hall, 1469
Westfall, George Arthur, 1729
Wheat, Robert F., 1617
Wheeler, Lewis Bawley, 1167
Whelan, Arthur Gerald, 1296
Whitaker, William Batchelor, 718
White, Henry Clay, 272
White, Homer Evert, 865
White, Lucius Alexander, 272
Whitelaw, Henry Neill, 865
Wiig, Laurence Maxon, 1167
Willard, De Forest Porter, 1983
Williams, Frederic Nathaniel, 272
Williams, Joseph Murray Jr., 865
Williams, Sara Angela Mulvanity, 272
Williamson, George Albert, 2099
Wilson, Prentiss, 174
Wilmore, Josiah Glenn, 1729
Wilson, Archer Alexander, 1849
Wilson, Isaac M., 272
Wilson, William Berry, 718
Winter, Alexander King, 1170
Winton, Sigmund Samuel, 1957
Witcher, Edward Kitchell, 1729
Wohrley, Ivan Charles, 718
Wolfe, Stanley George, 175
Womack, Edgar L., 1170
Workman, Irvin Samuel, 865
Worthey, William R., 718
Wylie, William Charles, 1729

Y

Yawger, Nathaniel Shurtz, 272
Yongue, Samuel Duffield, 2102
York, James Arthur, 621
Young, Charles Augustus, 621
Young, Edith Frances, 1167
Young, Edward V. J., 272
Young, William Clement, 1170
Youngblood, Daniel Joel Raymond, 1170

Z

Zaydon, John Paul, 1170
Zillessen, Frederick Otto, 174
Zimmerman, Fred, 865
Zingher, Joseph Mordicae, 1170
Zion, Samuel Mayer, 1729

V 16
1957

E

EDTA: See Edathamil
EAR
  external otitis, advisability of hydrocortisone in, 421
  involvement in dizziness, differential diagnosis, [Hoople] *1943
EATING
  swimming cramps after? 1090
ECLAMPSIA
  treatment, chlorpromazine, promethazine, and pethidine combined, [Sheraes] 1336—ab
ECONOMICS
  cost of welfare state, United Kingdom, 871
ECONOMICS, MEDICAL
  A. M. A. Bureau annual report on, 1022
  British physicians' pay dispute, 90; (want cost of living adjustment) 1856
  cost of medical school activities, 1459—E
  cost of Salk vaccine program, [Bistowish] 1890—ab
  economic tolerance of health insurance, (Council article) [Irwin] *1574
  federal medical-health spending for 1958, 1996
  foreign aid programs, 954—E
  hospital care for aged under social security, 841; 1283; (President's Page) 1701
  increased cost of drugs, United Kingdom, 1991
  inflation and medical service, 600—E
ECONOMICS, MEDICAL—Continued
  King Edward's hospital fund, United Kingdom, 1074
  medicine's role in financing health care costs, (Council report) [Allman] *1571
  related material and, bibliography, 1047
  running costs of hospitals, United Kingdom, 1736
  searching for cost of medical education, 1408
  "Underwriting Canadian Health," study by Dr. William Lougheed, 1171
ECTODERMAL DEFECT
  dysplasia of anhidrotic type, hereditary, [Bowen] 1509—ab

ECZEMA
etiology in tuberculosis: PAS-isoniazid-dihydrostreptomycin therapy, [Crissey & others] *1526
EDATHAMIL
calcium disodium, for saturnism, therapeutic effect and effect on lead excretion, [Salvini] 905—ab
calcium, in lead poisoning, [Meyers] 1752—ab
EDEMA
angioneurotic, in infant from tuna eaten 2 days before? 198
intractable idiopathic, metabolic insufficiency syndrome, sodium liothyronine in, [Morton] *124
of pregnancy, Diamox in, [Balthrop] 405—ab
EDUCATION
graduate, Carnegie Corporation grant for, 1162
Joint Committee on Health Problems in, annual report on, 1021
paramedical, annual Council report on, 1031
special committee on allied medical training, report on, 1011
EDUCATION, MEDICAL
A. M. A. Committee annual report on, 1007
American Medical Education Foundation: See Foundations
Annual Congress on: See American Medical Association
continuing, grant for, at St. Louis University, 2208
correspondence course on blood transfusion, 379
curriculum, graduate, U. of Pennsylvania revises, 1717
director appointed at St. Luke's Hospital, Chicago, 614
director appointed at St. Mary's Hospital, San Francisco, 370
for National Defense, (MEND), program for regular curriculum, 1443; 1458—E
graduate, annual Council report on, 1030
graduate, annual report and directory of Internships and residencies, and requirements of specialty examining boards, 453; 602—E
graduate, Residency Review Conference Committees and Internship Review Committee, in evaluation of, 603—E
in serendipity: big word in progress, (Medicine at Work) [Golin] *2084; 2088—E
life-long, 1458—E
number, 57th annual report, Nov. 16, p. 1393
pediatric, in India, 1855
postgraduate, annual Council report on, 1030
postgraduate courses, (Council listing) 359; 1601; 1833
Preprofessional: See Basic Sciences
special committee annual report on, 1011
Week, April 20-26, 1958, 256; (annual report on) 992
World Conference on, second, 1959, 1404; 1832
EDUCATIONAL COUNCIL FOR FOREIGN MEDICAL GRADUATES
progress, 1431; (begins operation) 1706
EFFUSIONS: See Pleurisy
EGGS
embryonated, for viral propagation, [Cheever] *2059
goose, hazard of eating, 642
ELBOW
tennis, hydrocortisone for, [Baily] 1211—ab
tennis, radiohumeral bursitis, is it traumatic? [Paul] 1752—ab
ELECTRIC
accidental electrocution, India, 1621
charge generated by body, care of patient with, 200
desiccation of pigmented nevi, biopsy studies, [Walton] 1509—ab
exploration of liver, France, 1986
razors, sterilization of, 639
shock, accidental, atrial fibrillation due to, [Wehrmacher] *349
shock, decreased spermatogenesis after, etiologic relation? 422
Shock Therapy: See also "Malpractice, electroshock" under Medicolegal Abstracts at end of letter M
shock therapy for chronic severe pain, [von Hagen] *773; (reply) [Lemere] 1861—C
shock therapy for patient with detached retina? 2030
shock therapy, methitural in, [Robie] 103—ab
stimulation of heart for 90 hours in Adams-Stokes disease, [Friesc] 286—ab
ELECTROCARDIOGRAM: See Heart
ELECTROCORTINE: See Aldosterone
ELECTRODES
cautery, grasping type to destroy rectal polyps, [Blaisdell] *1392
ELECTROENCEPHALOGRAPHY: See Brain
ELECTROLYTES
balance, nutrition in surgery, 1830—E
response after adrenalectomy, N. Z., 2216
sweat, fibrocystic disease of pancreas diagnosis by, United Kingdom, 390
ELECTROPHORESIS
C-reactive protein relation to, in children with various diseases, [Vest] 1202—ab
ELEMENTS
trace, in cancerous and non-cancerous tissues, spectrographic study, [Tietz & others] *2187
EMBOLISM
aortic, Austria, 2103
aorticorenal, nephrectomy for hypertension from, [Stone] 189—ab
arterial, and mitral commissurotomy, [Chalnot] 742—ab
arterial, with major gangrene, venous thrombosis simulating, [Waller] *344
cerebral and peripheral, warfarin sodium for, [Fremont & Jagendorf] *1381
cerebral, immediate treatment, [Carter] 1330—ab
fat, experimental study, [Halasz] 305—ab; (mechanism) [Krönke] 733—ab
fever from, in valvular heart disease, [Ross & others] *1
prophylaxis, limitations of, [Buser] 2009—ab
pulmonary, maternal mortality from, United Kingdom, 627
pulmonary, varied clinical manifestations, [Israel] 1741—ab
pulmonary, vectocardiographic diagnosis, [Wolff] *1784
EMERGENCY
initial treatment of burns in mass casualties, [Brown & Glover] *643
surgery, safe transportation of newborn infants for, [Bishop] *1230
EMETINE
contraindicated in amebic hepatitis in patient with old myocardial infarction? 1225
treatment of scorpion stings, United Kingdom, 724
EMOTIONS
"passing-out" of infants and children, cause and treatment, [Janson] 759—ab
EMPHYSEMA
anoxia in, oxygen for, [Simpson] 1497—ab
bronchitis and, [Mayer & Rappaport] *1227
climatic advantages for, 2138
obstructive, in infants, [Valledor] 301—ab
pulmonary (focal): histology, genesis of early centrolobular lesions, [McLean] 1346—ab
pulmonary, vs. pulmonary insufficiency in etiology of cor pulmonale, [Rappaport & Mayer] *431
treatment, [Israel] 1078—ab
EMPLOYEES; EMPLOYMENT: See Industrial Health
ENCEPHALITIS
after varicella, [Bergsjö] 886—ab
brain-stem, [Bickerstaff] 755—ab
Japan, 723
measles, adrenal steroids for, [Allen] 1200—ab
"polioencephalitis," clinical and laboratory study, [Snell] 1330—ab
syphilitic, electroencephalography in, Colombia, 1298
ENCEPHALOGRAPHY: See Brain, roentgen study
ENCEPHALOMYELITIS
epidemic, United Kingdom, 389
myalgic, epidemic, United Kingdom, 1857
ENCEPHALOMYELOPATHY
in Behçet's disease, necropsy findings, [Mc-Henemey] 1840—ab
ENCEPHALOPATHY
in childhood, fresh tissue and sicracell for, [Destunis] 2133—ab
ENDANGIITIS OBLITERANS
renal function in, [Holle] 1745—ab
ENDOCARDITIS
bacterial, fever from, in valvular heart disease, [Ross & others] *1
bacterial, subacute, oral phenoxymethyl penicillin for, [Santos-Buch] 1494—ab
lenta, chemotherapy in, [Kalpalnen] 2008—ab
micrococcal bacteremia without, [Schirger] 1342—ab
rheumatic, false diagnosis of hyperthyroidism, [Jonsson] *1533
streptococcal, oral phenoxymethyl penicillin and intramuscular streptomycin for, [Walker] 2116—ab
ENDOCARDIUM
fibroelastosis, [Beveridge] 1202—ab
ENDOCRINE GLANDS
disorder, toxemia of pregnancy probably due to, India, 1174
disturbances, mild, menstrual irregularities from, 1223
fellowships at Donner Laboratory, Berkeley, Calif., 1842
hyperfunction and hypofunction, and diabetes, [Skillern] 732—ab
research, Israel Medical Association meeting on Herman Zondek's 70th birthday, 1071
tumors, multiple, and peptic ulcer, [Fisher] 899—ab
ENDOMETRIOSIS
genital, and pregnancy, [Ahumada] 193—ab
ENDOMETRIOSIS—Continued
in vaginal scar after hysterotomy for therapeutic abortion, [Gottlieb] 192—ab
treatment, value of irradiation, [Brosset] 192—ab
ENDOMETRIUM
Cancer: See Uterus Cancer
of sterile women, Peru, 274
ENDOSCOPY
control, harmful effects of daily enema, (replies) [Page; and original consultant] 2245
ENEMA
daily, harmful effects, (replies) [Page; and original consultant] 2245
ENTERITIS; ENTEROCOLITIS: See Intestines, inflammation
ENTEROBIASIS: See Oxyuriasis
ENTEROCOCCUS: See Streptococcus
ENURESIS: See Urination
ENZODASE: See Hyaluronidase
ENZYMES: See also specific enzymes, as Transaminase; Trypsin; etc.
drug reactions, biochemical genetics and, (Council report) [Motulsky] *835
duodenal, in infants with kwashiorkor or dystrophy, [Russo] 890—ab
extra-thyroid, deficiency in sporadic cretinism, [Hutchison] 2017—ab
in blood in muscular dystrophy and other muscular and neuromuscular diseases, [Pearson] 413—ab
muscle, changes in, in myocardial infarction, [LaDue] *1776
pancreatic, for radiation lesions, [Bacchi] 898—ab
EOSINOPHILS
circulating: epinephrine, cortisone and ACTH effects on compared, India, 867
Eosinophilic Granuloma: See Granuloma
eosinophilic myocarditis related to trichinosis fatal, [Chase] *1826
infiltration of stomach and small intestine, [Ferrier] 1079—ab
EPHEDRINE
sulfate for enuresis in teen-agers, hazard of, 118
EPICARDIUM: See Pericardium
EPIDEMICS: See under specific disease, as Influenza
EPIDEMIOLOGY
studies in Hodgkin's syndrome, [DeVore] 1869—ab
EPIDERMOID CARCINOMA
in situ of skin, Peru, 1622
EPILEPSY
abdominal: diagnosis, pathogenesis and therapy, 2029
diagnosis in boy 7, 1224
fits in leukotomized patients receiving chlorpromazine, [Liddell] 292—ab
latent, convulsant action of phenothiazine derivatives in, [Fazekas & others] *1241
neurological aspects, clinical and etiological view, [Alfandary] 754—ab
of children, meprobamate for, [Livingston] 2124—ab
paroxysmal abdominal pain as manifestation of, [O'Brien] 1879—ab
psychomotor, histopathology; study with silver carbonate, [Scharenberg] 103—ab
reading, [Stevens] 1331—ab
EPINEPHRINE: See also Arterenol
effects of ACTH and cortisone compared, India, 867
secreting neuroblastoma in infant, [Mason] 2017—ab
test for allergy in recurrent abdominal pain in boy 8, (reply) [Rosen] 1520
urinary, in differential diagnosis of essential hypertension and pheochromocytoma, [Henry] 1869—ab
EQUANIL: See Meprobamate
ERIDONE: See Phenindione
ERUPTIONS
Creeping: See Larva migrans
Industrial: See Industrial Dermatoses
ERYTHEMA
Multiforme: See Stevens-Johnson Disease
Nodosa: See also Coccidioidomycosis
nodosa, allergic dermatosis, [Rostenberg] *1118
reaction after appetite stimulation, 313
ERYTHREMIA: See Polycythemia
ERYTHROBLASTOSIS, Fetal: See Hemolytic Disease of Fetus and Newborn
ERYTHROCIN: See Erythromycin
ERYTHROCYTES
desiccated, effect on cicatrization of wounds; use in plastic surgery, [Giles] 1323—ab
in urine one year after acute hemorrhagic glomerulonephritis significant? 1769
Sedimentation: See Blood sedimentation
transfused, survival, Brazil, 866
ERYTHROMYCIN
tetracycline with, in vitro and antibacterial action of blood after, [Jones] 2237—ab
ESCHATIN
treatment of delirium tremens, Sweden, 1624

ESKIMOS, botulism in Labrador, 1859
ESOMID: See Hexamethonium
ESOPHAGITIS
peptic, hiatus hernia complicated by, [Lindskog] 1319—ab
ESOPHAGUS
achalasia: etiology, pathogenesis, treatment, Spain, 2107
atresia with tracheoesophageal fistula in newborn, transportation for surgery, [Bishop] *1250
ectopic gastric mucosa cause tumor? clinical significance, 117; (replies) [Berger; and original consultant] 2142
hemorrhage, massive, [Zenker] 1191—ab
perforation, instrumental: primary esophagogastrectomy for, [Blalock] 2121—ab
stress ulcers, perforation after thermal burns, [Derrick] 882—ab
varices, bleeding, in liver cirrhosis, [Weber & others] *1899
varices, bleeding, treatment, 640
varices secondary to portal cirrhosis, natural history, [Palmer] 1497—ab
ESSAY CONTESTS: See Prizes
ESTRADIOL
valerate, long-acting, to inhibit lactation and relieve postpartum breast engorgement, [Rosenblum] 1333—ab
ESTROGENS: See also specific preparations
carcinogenic effect of prolonged administration, United Kingdom, 90
methodology conference report on, United Kingdom, 90
treatment, delaying mechanism in early prostate cancer, [Hodges & others] *1965
treatment of breast cancer, gonadotropin assays and response, United Kingdom, 1735
treatment of coronary insufficiency? 1360
treatment plus vitamin B complex in oral cancer, India, 1471
ETHCHLORVYNOL
for daytime sedation, N. N. D., 157
ETHER
alopecia from? 765
ETHICS, MEDICAL
A. M. A. Judicial Council Session on 2 appeals on society membership, judicial matters and fees, 839
deterioration in relations between family physician and consultant, United Kingrom, 276
revised principles, (obligation to apply principles) 1024; (annual report on) 1048
ETHNICS
aspects of ABO blood groups disease associations, [Buckwalter & others] *327
ETHOHEPTAZINE
as analgesic, 428
ETHYL BISCOUMACETATE
treatment of thromboembolism evaluated, [Nelson] 186—ab
ETHYL CHLORIDE
treatment of creeping eruption, 1769
ETHYLENE OXIDE
sterilization of shoes in skating rink, 116; (replies) [Leonards; and original consultant] 2246
ETHYLENEIMINE QUINONE
treatment of diffused neoplasia, [Di Pietro] 1343—ab; [Verga] 1510—ab
treatment of malignant tumors, Austria, 81; 2103
2-ETHYL, 2-PHENYL GLUTARIMIDE: See Glutethimide
EVACUATION
aeromedical system, 1289
EVIDENCE: See Medicolegal Abstracts at end of letter M
EXAMINATIONS
Physical: See Physical Examination
students and, United Kingdom, 1305
EXCITEMENT
hazards of immediate postoperative period, [Dripps] *795
EXERCISE
control of fatigue in older persons, (Council article) [Klumpp] *605
peripheral disappearance of thyroid hormone after, Spain, 2107
role in aging, (Council article) [White] *70
tolerance to evaluate disability 2–5 years after mitral commissurotomy, [Logan] 1746—ab
EXHAUSTION: See Fatigue
EXHIBITS
A. M. A. Bureau, (annual report) 1015; (new exhibits) 1962
EXOPHTHALMOS
in infant, prenatal effect of thyroid given during pregnancy, 198
EXPECTORANTS, efficiency of, 2244
EXTREMITIES
acro-osteolysis and familial ulcers, mutilating lesions, [Bogaert] 2006—ab
lower, clinical and lymphangiographic studies in primary lymphedema, [Kinmonth] 2232—ab
lower, phlebitis, surgical treatment, Belgium, 1297
EXTREMITIES—Continued
spread of soft-tissue sarcoma along nerve trunks, [Barber] 746—ab
upper, absence of pulse due to aortic arch anomaly, [Azevedo] 1315—ab
Vascular disease: See Arteries: Arteriosclerosis: Blood circulation: Blood Vessels
EYELIDS
cancer, [Kaminsky] 2018—ab
failure to close during sleep, 764
lesion, diagnosis and treatment, 312
oculoglandular form of cat-scratch disease, [Levitt] *1955
EYES
bank and corneal grafting program, [Ormsby] 409—ab
carotid artery occlusion, diagnosis by ophthalmodynamometry, [Wood & Toole] *1264
changes in eyegrounds of diabetic children, [Helmsius] 891—ab
damage from lye, 1896
deviations, orthoptics, value in, 1219
disease, combined hydrocortisone-oxytetracycline therapy, [Berman] 2019—ab
disease, herpes zoster, Finland, 86
enucleation in hemifacial removal of giant chondroma of maxilla, [Garcia Blanco] 753—ab
exposure to chlorine gas, cause loss of vision and chorioretinitis? 1360
exposure to soldering fumes, 764
infection, adenovirus, United Kingdom, 1737
injury, recurrent erosion of cornea after, 1356
involvement in dizziness, differential diagnosis, [Hoople] *1943
lesions in hereditary renal disease, [Goldbloom] 1751—ab
manifestations of Fuller-Albright syndrome, [Alfano] 1207—ab
metastases in Hutchison-Pepper syndrome, [Das Gupta] 409—ab
saccharin effects on, 1770
"spots" before, allergy cause? 422
tension (test), unreliability, [McDonald & Cayglll] *1131
toxoplasmosis, [Forbes] 1206—ab
EYESIGHT: See Vision

F

FABRICS: See Textiles
FACE
disfigured, grant to N. Y. U.-Bellevue Medical Center for rehabilitation, 1284
injuries, severe, role of plastic surgeon in, [Anderson] *1922
rehabilitation after radical parotid-gland surgery, [Conley] 895—ab
FAINTING: See Syncope
FAIRS: See Science fairs
FALLOPIAN TUBES: See Oviducts
FALLOT, Tetralogy of: See Heart Anomalies
FALZONE, JOSEPH A., JR., honored as artist, exhibit tours, 56
FAMILIES: See also Heredity; Twins
coronary disease, prediction and prevention, 2140
familial inability to use thumb, treatment, 1223
familial lethal disease: Chédiak-Higashi syndrome, [Donohue] 2014—ab
familial paroxysmal paralytic myoglobinuria, [Fitz] 1079—ab
familial persistent pupillary membranes, [Cassady] 2019—ab
familial pulmonary alveolar microlithiasis, [Sosman] 901—ab
familial ulcers, mutilating lesions of extremities and acro-osteolysis, [Bogaert] 2006—ab
large, familial polyposis of large intestine in, [Turner] 1328—ab
Marfan's syndrome, description of, [Wilson] 2224—ab
7 cases of viral meningitis in one family, Canada, 1172
treatment of familial hyperhidrosis palmaris in Japanese, [Coward] 289—ab
FANCONI'S SYNDROME
renal tubular resorption with aminoaciduria and osteomalacia, [Astrup] 285—ab
FARM-CITY WEEK
Nov. 22–28, A. M. A. participates in, 256; (annual report) 992; 1569—E
FASHION
plastic surgery and, United Kingdom, 1304
FAT
edible, distribution of saturated and unsaturated fatty acids in, 911
embolism, (experimental study) [Halasz] 305—ab; (mechanism) [Krönke] 733—ab
emulsion for intravenous administration, [Mueller] 1886—ab
high, high-protein, low-carbohydrate diet in treating obesity, [Thorpe] *1361
loads, acute, effect on serum lipids in atherosclerosis, [Horlick] 1317—ab
necrosis, pericardial, [Jackson] 101—ab
reflex vomiting after fatty meal, 421
FATIGUE
coffee to relieve, how does it work? 913
control of in older persons, (Council article) [Klumpp] *605
false diagnosis of hyperthyroidism, [Jackson] *1533
FATTY ACIDS
unsaturated and saturated, explanation, distribution in edible fats, 911
unsaturated, wheat germ, and prevention of atherosclerosis, 111
FEAR
elimination in cardiac rehabilitation, [Williams & others] *791
FECES
Blood in: See Melena
coproliths, [Berg] 306—ab
incontinence, pouch or bag for? 766
stercoraceous vomiting, diagnosis, treatment, 1360
FEDERAL: See United States
FDA: See Food and Drug Administration
Income Tax: See Tax
Legislation: See Laws and Legislation, federal
FEES
commensurate with services rendered and patient's ability to pay, Judicial Council opinion on, 839
FELDSPAR dust, risk of silicosis, 909
FELLOWSHIP FOR FREEDOM IN MEDICINE
"bluebook full of whitewash": Guillebaud report on NHS, United Kingdom, 277
FELLOWSHIPS
American President Lines, granted through World Rehabilitation Fund, Philippines, 1978
approved by specialties, 453; 459; 490; (approved training programs) 560; 602—E
Atomic Energy Commission, in industrial medicine, 1980
Chance (Frank L.), in hematology established, 1719
Dugan (Frank W.), in cardiology, 2095
graduate, atomic energy program, 1722
Guggenheim (Daniel and Florence), 1715
health grants from U. N. International Children's Emergency Fund, India, 867
in clinical investigation established by American Drug Manufacturers Association, 1607
in industrial medicine at U. of Cincinnati, 1605
in medical neoplasia, by Memorial Center for Cancer and Allied Diseases, New York, 1465
in nuclear science, 1847
in pathology at New York U., 850
in respiratory diseases available, 854
metabolic and endocrinology, at Donner Laboratory, Berkeley, Calif., 1842
Miller (James Alexander), in tuberculosis, 264
National Council to Combat Blindness, open, 852
National Research Council, open, 1290; 1606
National Science Foundation announces, 1066
ophthalmology, winners announced, 171
Osborne (Earl D.), in dermal pathology, 710
Picker Foundation Fellow in Radiological Research, 75
postdoctoral, announced by American Foundation for Allergic Diseases, 616
postdoctoral, National Research Council survey, 1963
radiology at Donner Laboratory, Calif., 1975
speech and audiology, at Northwestern U., 618
USPHS research, 1438
FEMUR
fractures of neck, treatment, [Godoy Moreira] 1329—ab
FENESTRATION
dry fenestra novovalis operation, [Lempert] *229
FERRIC: See Iron
FERTILITY: See also Sterility
after pregnancy according to height and weight, [McKeown] 887—ab
genital tuberculosis in male effect on, [Veenema] 1205—ab
promotion in woman 37, 1222
FERTILIZERS
Salmonella in, United Kingdom, 872
FETUS
effect on, of mother taking diuretic, 1517
Erythroblastosis: See Hemolytic Disease of Fetus and Newborn
hemorrhage into maternal circulation, (neonatal anemia from) [Gunson] (shock from) [Shiller] 1199—ab
poliomyelitis during pregnancy damage? [Töndury] 1341—ab
postmature, oxygen levels in, [Kohl] *1659
weight (estimated), fetopelvic grading of breech presentations, [Kaltreider] *132
FEVER
coal-tar sensitivity, antipyretics which do not contain coal tar? 2031
polyarthritis and lymphadenopathy with, in young man, (Diagnostic Problems) [Kushner & Szanto] *1690
problem in valvular heart disease, [Ross & others] *1

V 16
1957

FEVER—Continued
swamp or field, field hamster as source of infection, [Mochmann] 308—ab
therapy in nephrotic syndrome, India, 2214
transfusion reactions caused by sensitivity to donor leukocytes and platelets, [Brittingham & Chaplin] *819
FIBRINOGEN: See Blood fibrinogen
FIBROELASTOSIS: See Endocardium
FIBROSIS
Cystic: See Pancreas
FILARIASIS
diagnosis and treatment, individual safe as handler of foods? 1219
FINGERS
familial inability to use thumb, treatment, 1223
melanoplakia, generalized intestinal polyposis with, [Richterich] 732—ab
splint, simple, [White] *916
FIRST AID
for poisoning, recommendations of Committee on Toxicology, (Council report) *686; (reply: poison control centers) [Cann] 1994—C
in traffic accidents by physicians, [Carstensen] 2123—ab
FISH: See also Shellfish
stinging jelly fish, United Kingdom, 1735
tuna, allergy in infant possible 2 days after eating? 198
FISTULA
biliary, Brazil, 2104
Eck's, in dogs; coma with increased brain and cerebrospinal fluid amino acids in, [Bollman] 1878—ab
pulmonary arteriovenous, roentgen manifestations: diagnosis and treatment, [Steinberg] 1758—ab
sigmoideouterine, complicating diverticulitis, [Smalley & others] *827
tracheoesophageal, with esophageal atresia in newborn, transportation for surgery in, [Bishop] *1230
FITNESS: See Physical Fitness
FITZGIBBON, JOHN HAROLD (1894-1957)
A. M. A. Trustee, death of, (photo) 620
FLATULENCE
abiatrophy of anal sphincter in woman 67, treatment, 1897
FLEXIN: See Zoxazolamine
FLORINEF: See Fludrocortisone
FLUDROCORTISONE ACETATE
treatment plus cortisone after adrenalectomy, N. Z., 180
FLUORINE
Fluoridation of Water: See Water
fluoride osteosclerosis, [Stevenson] 904—ab
sea salt as source of fluoride, toxicity, 1769
FLUOROHYDROCORTISONE: See Fludrocortisone
FLUOTHANE
new anesthetic, United Kingdom, 1175
symposium, Canada, 624
use in closed circuit, [Marrett] 2135—ab
FLYERS: **FLYING**: See Aviation
FOG: See also Smog
as therapeutic agent, [Tovell] 417—ab
FOLINIC ACID
in megaloblastic anemia of pregnancy, [Scott] 1881—ab
FOOD
allergy, tests in children after prolonged corticosteroids for asthma, (reply) [Engelsher] 120
A. M. A. Council annual report, 999
handler, outbreak of tuberculosis in school from, [Moss] 1635—ab
handlers, individuals with filiarasis safe as? 1219
Infant's: See Infants, feeding
poisoning, experimental, by Clostridium welchii, [Dische] 1493—ab
poisoning, United Kingdom, 723
rationing discontinued, dietary changes after, United Kingdom, 1075
swimming cramps after eating? 1090
welfare, United Kingdom, 724
FOOD AND DRUG ADMINISTRATION
in drug control, [Dowling] *657; 688—E
FOOD, DRUG AND COSMETICS ACTS: See Medicolegal Abstracts at end of letter M
FOOT
Athlete's: See Dermatophytosis
congenital deformity in 3 generations, outlook for 4th, 201
drop, painful knee, and hemoptysis, (Diagnostic Problems) [Kushner & Szanto] *2193
Madura, treatment, (replies) [Liber; and original consultant] 1520
FORCEPS
delivery, Brazil, 1731
FOREIGN BODIES: See also "Malpractice, foreign bodies" under Medicolegal Abstracts at end of letter M
ingestion of, magnetic removal? (replies) [Blackford; and original consultant] 766
FOREIGN COUNTRIES
medical foreign aid programs, 954—E
FORENSIC MEDICINE: See Medical Jurisprudence
FORMALDEHYDE
chronic degeneration of brain in worker exposed to, etiologic relationship? 1354
dermatitis from Celcron, 642
FOUNDATION GARMENTS
harmful or harmless to abdominal musculature? 641
FOUNDATIONS
American Foundation for Allergic Diseases fellowships, 616
American Medical Education, (reports) 1049; 1410; (Dr. Lull named president) 2092; (fund-raising drive) 2263
American Medical Research, A. M. A. established, 256; 1705
Automotive Safety, grant for traffic accident research, 1063
Avalon, grant to New York U.-Bellevue Medical Center for rehabilitation of facially disfigured, 1284
Babcock (Mary Reynolds), grant for study of sex behavior and venereal disease in teenagers, Mo., 1158
Bennett (A. E.) Neuropsychiatric Research, award in biological psychiatry, 1286
Blankenhorn (Marion A.) memorial research fund established, Ohio, 850
charitable, for rheumatic and heart disease research, Canada, 720
Child Welfare Foundation of American Legion grant to study sex behavior and venereal disease in teenagers, Mo., 1158
Commonwealth Fund, annual report, 1719
Donner, given Van de Graaff x-ray generator to U. of Missouri, 1843
for Tay-Sachs' disease established, 2097
Ford, grants, (for diagnostic building at Georgetown U.) 818; (for mental health study at U. of Pennsylvania) 1285
Geschickter, grant for Diagnostic Building at Georgetown U., 848
Goodman (Jane Bender) Hodgkin's Disease Research Fund, creation of, 2094
Gregg (Alan) Memorial Fund established by National Health Council, 1718
Guggenheim (Daniel and Florence), establishes Aviation Health Center at Harvard U., 1715
Health Information, statistics on U. S. accidents, 1720
Hematology Research, research grants, 1161
Hyde (Lillia Babbitt), gift to N. Y. U.-Bellevue Medical Center, 1463
Industrial Hygiene, 22nd annual meeting, 1065
Kellogg (W. K.), grants, (for Educational Council for Foreign Medical Graduates) 1431; (in chronic disease diagnosis) 1604; (for continuing education at St. Louis U.) 2208
Mayo, portrait of Dr. William F. Braasch presented to, 1157
Menninger, visiting professor, 2206
Motley (Lila) Cancer, gift to N. Y. U.-Bellevue Medical Center, 1976
Myers (Reine Bumbaird), grant for audiology and speech fellowships at Northwestern U., 618
National Foundation for Infantile Paralysis grant for Respirator Center, Madison, Wis., 1845
National Muscular Dystrophy Research, cosponsors clinic, Texas, 851
National Science, (grant) 264; (fellowships) 1066; (research review) 1409; (publications) 1611
New York, grant for building at N. Y. U.-Bellevue Medical Center, 1716
Nuffield, report on cortisone vs. prednisone in rheumatoid arthritis, 182; 1888—ab
Nutrition, (A. M. A. cooperation with) 1000; (grants) 1605
Orthopaedic Research and Education grants, 2097; 2208
Picker (James), radiological research awards, 75; 854; 1606
Rands Family, grant to Wayne State U., 849
Rippel (Annie E.), grant for rehabilitation department at Mountainside Hospital, N. J., 1602
Rockefeller Brothers Fund, grant to Joint Commission on Mental Illness and Health, 852
Rockefeller, grants, 375; 376; 618; 851; 1431
Sister Elizabeth Kenny, scholarships for neuromuscular disorders, 852
Sloan (Alfred P.), grants, (for hospital administrators program at Cornell U.) 1716; (for visiting professor at Menninger Foundation) 2206
Trimble (Harold G.) Memorial Research Fund established, Calif., 1714
World Rehabilitation Fund sponsoring international projects, 853; (felowships) 1978
FRACTURES: See also "Malpractice: fractures" under Medicolegal Abstracts at end of letter M

FRACTURES—Continued
humeral shaft, Canada, 1732
of neck of femur, treatment, [Godoy Moreira] 1329—ab
of transverse lumbar processes possible without clinical symptoms? 1648
orthopedic management of severely injured patient, [McCarroll] *1913
reduction principles, (Illustrated Film Reviews) [Larmon] *1865
FRENQUEL: See Azacyclonol
FULLER-ALBRIGHT SYNDROME: See Dysplasia, polyostotic fibrous
FUNDS: See Foundations
FUNGI
allergens in air in etiology of asthma, Spain, 2107
fungistatic activity of aromatic diamidines, India, 1071
Infection: See Mycosis; and specific infection as Blastomycosis

G

GALLBLADDER
calculi, solitary: symptoms, complications, treatment, [Bohn] 1193—ab
disease, conservative treatment of cholecystitis: complications, results, [Lyndrup] 878—ab
excision, duodenal intubation after, Brazil, 866
roentgen study to demonstrate choledochal cyst, [Moseley] 305—ab
GAMMA GLOBULIN
agammaglobulinemia and vaccinia gangrenosa, [Somers] 633—ab
agammaglobulinemia, congenital, [Black] 1749—ab
GANGLION (nerve)
aganglionosis of myenteric plexus, diagnosis and treatment, [Riker] 1874—ab
blocking agents for arterial hypertension, [Ronnov-Jessen] 1080—ab
blocking effect of new malonylurea derivative, [Minini] 897—ab
GANGRENE
gas, problems in diagnosis and treatment, [Altemeier] 291—ab
major, venous thrombosis simulating arterial embolization with, [Waller] *341
vaccinia gangrenosa and agammaglobulinemia, [Somers] 633—ab
GARLIC extract for psoriasis? 117
GAS
Distention of Intestines: See Flatulence
gangrene, problems in diagnosis and treatment, [Altemeier] 291—ab
meter vs. spirometer to determine vital capacity and maximal breathing capacity, [Worton & Bedell] *1652
GASOLINE
boron, dermatitis from, 1356
GASTRECTOMY: See Peptic Ulcer: Stomach, surgery
GASTRIC: See Stomach
Ulcer: See Peptic Ulcer
GASTROENTERITIS
Salmonella thompson, [Wright] 1761—ab
GASTROENTEROSTOMY
vagotomy with, for duodenal ulcer, [Hindmarsh] 744—ab
vagotomy with, vs. partial gastrectomy, side-effects compared, [Cox] 189—ab
GASTROINTESTINAL TRACT
cancer, preoperative nitrogen mustards for, [Maur] 750—ab
disease, effect on excretion of uropepsin, [Corazza & Myerson] *146
gastroenterology lectureship honoring Dr. Mandred W. Comfort established, 1462
hemorrhage from upper tract, [Weber & others] *1899
manifestations after prednisone and prednisolone for rheumatoid arthritis, [Stoltzer & others] *13
polyposis: Peutz syndrome, [Bailey] 2224—ab
roentgen study of untoward effects of hexamethonium, [Ettman] 415—ab
side-effects related to prednisone and prednisolone, [Dordick] 898—ab
GASTROSCHISIS
case, [Kies-wetter] 758—ab
GENERAL PRACTICE
background preparation for, 1404
change in reported proportion of postgraduate courses designed for, 1432
glaucoma detection in, [Gallardo] 2234—ab
in Canada, study by U. of Toronto, 618
morbidity census in, Denmark, 1298
obstetric analgesia and anesthesia in, [Bonica] *2146
scope for hypnosis in, [Fry] 294—ab
GENERAL PRACTITIONERS
A. M. A. award, (deadline for biographies) 1057; (award to Dr. C. W. Clark) 2089—E; 2200
mental health and, 1961

GENERAL PRACTITIONERS—Continued
poliomyelitis risk to, United Kingdom, 391
questionnaire survey of cardiac rehabilitation, [Williams & others] *791
GENETICS. See Heredity
GENITALS
endometriosis and pregnancy, [Ahumada] 193—ab
tuberculosis, healed; etiologic factor in ectopic pregnancy, [Halbrecht] 888—ab
tuberculosis in male, pathology and effect on fertility, [Veenema] 1205—ab
GENITOURINARY SYSTEM
nephrectomy for tuberculosis with preoperative and postoperative chemotherapy, [Obé] 1206—ab
tuberculosis, treatment, [Palchetti] 1610—ab
GENTIAN VIOLET: See Methylrosaniline
GEOGRAPHY
number of internships by census region and state, 455; 456
source of entering students, 1423
GEORGETOWN UNIVERSITY
Diagnostic Building begun, 818
GEORGIA case, Judicial Council session on, 839
GERIATRICS: See Old Age
GIARDIASIS (lambliasis)
treatment, Acranil, dosage, (reply) [Berberian] 1090
GIN, prescribing, United Kingdom, 1857
GIRDLES: See Foundation Garments
GLAUCOMA
detection in general practice, [Gallardo] 2231—ab
diagnosis, unreliability of tactile tension, [McDonald & Caygill] *1131
preanesthetic atropine and scopolamine in patients with, [Schwartz & others] *144
treatment, acetazolamide, (use and misuse) [Chandler] 106—ab; (propanyl derivative) [Ballstocky] 107—ab
which hypotensive drugs cause exacerbation? 2139
GLIOMA
gliomatosis cerebri, [Dunn] 1213—ab
of optic pathways in childhood, [Fowler] 2120—ab
GLOBULIN: See also Gamma Globulin
antihemophilic (animal), and human plasma in surgery in hemophilia, [Macfarlane] 1877—ab
antihemophilic deficiency with capillary defect, [Fessey] 2007—ab
antilymphocytic, United Kingdom, 872
GLOMERULONEPHRITIS: See Nephritis
GLOMUS TUMOR
gastric, [Shocket] 718—ab
is it rare? [Vollset] 2238—ab
GLOVE-type extension hand splint, [Modern & others] *241
GLUCOSE
in Blood: See Blood sugar
β-GLUCURONIDASE
in urine in cancer, United Kingdom, 88
GLUCURONIDES
urinary, effect on solubility of calcium phosphate and stone formation, [Vermeulen] 302—ab
GLUTAMIC oxalacetic aminophcrase: See Transaminase
GLUTETHIMIDE
poisoning, 4 fatal cases [McBay] 1343—ab
GLYCERYL TRINITRATE
hazard in myocardial infarction, 114
GLYCINURIA: See Aminoaciduria
GLYCOSIDES
cardiac, "mixing," sound procedure? 1898
GLYCOSURIA
test not available to diabetics, United Kingdom, 1175
GOITER
colloid, false diagnosis of hyperthyroidism, [Jackson] *1533
GOITER, TOXIC
effects of oral and intramuscular reserpine in, [Canary] 2126—ab
myopathy with disturbance of potassium metabolism in, [Collings] 2232—ab
treatment, I^{131}, [Atabek] 395—ab
GOLD: See also Radio-Gold Colloid
radioactive grains for bladder growths, [Yates-Bell] 195—ab
radioactive, in prostate, Canada, 1732
GOLF
course, incidence of myocardial infarction, mortality in, 1220
GONADOTROPINS
assays and response to treatment of breast cancer with estrogens, United Kingdom, 1735
pregnant mare's serum, contraindicated in arrested tuberculosis? 909
GONADS
dysgenesis: genetic, developmental and hormonal aspects, [Witschi] 900—ab
hypogonadism, role in etiology of pituitary tumors, [Caughey] 1197—ab
ontogenesis, sex chromatin pattern in seminiferous tubule dysgenesis relation to, [Grumbach] 900—ab
GOOSE eggs, hazard of eating, 642
GOUT
monarticular arthritis after poliomyelitis vaccination indicates, (reply) [Kadish] 119
GRADUATES
distribution in U. S. and Canada by sex, 1956-1957, 1422
Foreign: See Physicians, foreign
in medical and basic science schools in U. S., 1931-1957, 1420
in U. S., 1429
GRANULOMA
eosinophilic, bone lesions disappear after ACTH therapy, [Flosi] 2005—ab
eosinophilic, pulmonary, primary, [Arnett] 2025—ab
GRAPHITE
industrial toxicity: pneumonoconiosis, (replies) [Liber; and original consultant] 914
GRASS
spikes, inhalation of, United Kingdom, 724
GRAVES' DISEASE: See Goiter, Toxic
GREAT BRITAIN: See British
GRIEVANCE COMMITTEE: See Medicolegal Abstracts at end of letter M
GROWTH
after spine fusion in young children, [Hallock] 745—ab
arrest complicating prednisone and prednisolone therapy in allergy, [Bukantz & Auburchon] *1256
corticosteroids effect on, in children, (replies) [Trimble; and original consultant] 120
Hormone: See Somatotropin
of boy 16 with small body and features, 1766
GRUNT: See under Speech
GUNSHOT WOUNDS: See Wounds
GYNECOLOGY
disorders, sodium Ilothyronine in, [Morton] *124

H

HAIR
excessive, antituberculous drugs cause? 909
excessive, treatment and prognosis of hypertrichosis in girl 18, 204
Loss of: See Alopecia
HAIRDRESSING
salons, sanitation, Norway, 1301
HALL OF FAME
on medical history, at headquarters of International College of Surgeons, [Thorek] 1187—C
HALLUCINATIONS
disappear in schizophrenia after azacyclonol, [Odland] *333
HALOTHANE: See Fluothane
HAMARTOCHONDROMATOSIS
bronchial, [Debré] 1190—ab
HAMARTOMA
of lung and tuberculomas compared, [Bleyer] 904—ab
HAMSTER
field, source of swamp or field fever, [Mochmann] 308—ab
HAND
congenital deformity in 3 generations, outlook for 4th, 201
disinfection against viruses of hepatitis, 641
Shoulder-Hand Syndrome: See Shoulder
splint, glove-type extension, [Modern & others] *241
sweaty, hyperhidrosis palmaris: familial disease in Japanese, [Cloward] 289—ab
HARVARD UNIVERSITY
Aviation Health Center, postgraduate program, 1715
HAY FEVER
treatment, methylprednisolone, [Feinberg & others] *1560
HEADACHE
Chicago M. dical School's clinic at Mt. Sinai Hospital, 169
etiology: allergy? 422
occipital, and neck pains relieved by lying down, non-fusion of cervical vertebral spinous process cause? 1898
HEALTH
A. M. A. Bureau, annual report on, 1019
A. M. A. periodic publication on, report on, 977
centers, union and management, guiding principles for evaluating, annual report on, 1011
conference on "Animal Diseases and Human Health," N. Y., 170
conference on television and radio in health field, 56
education, A. M. A. Bureau annual report, 1015
education in industry, A. M. A. Committee annual report, 1006
education, radio and television in, annual report on, 1017
Examination: See Physical Examination
federal spending for 1958, 1996
grants from U. N. International Children's Emergency Fund, India, 867
in heavens, aviation medicine, (reply) [Benford] 91—C
Industrial: See Industrial Health
Insurance: See Insurance
HEALTH—Continued
maintenance for the oldster, (Council article) [Rolle] *164
Manpower Chart Book, 1401
Minister of: See National Health Service
Ministers Conference, India, 1986
National Health Service: See National Health Service
national survey, advisory committee on, 1723
national voluntary associations, brochure on objectives, organization, and financing, Canada, 1619
problems in education, Joint Committee, annual report on, 1021
problems of aging, challenge to preventive medicine, [Burney] *140
program for hospital personnel, annual report, 1006
program on "war footing," India, 180
public, aspects of radiation, Dr. R. H. Morgan appointed USPHS special consultant on, 1611
public, community cooperation in, 1831—E
public, dedication of building, Albany, N. Y., 262; (photo) 263
public, developmental program by American Public Health Association, 375
public, mission of preventive medicine, [Tracy] *343
public, personnel, recommend basic salary scales and qualifications, Canada, 1172
public, positions available, (N. Y.) 615; (National Security Agency) 1718
public, state and local departments, research in, [Hardy & Dublin] *1808
public, training nurses in, India, 1300
record, family, booklet for, Pa., 1604
Rural: See Rural Communities
second 5-year plan, India, 1620
service, French and British compared, United Kingdom, 723
services for school-age child: new approach, [Jacobziner] *1669
survey, free medical examination, Sweden, 1625
"Underwriting Canadian Health," study by Dr. William Lougheed, 1171
USPHS, appoint assistant for industrial cancer research, 1299
USPHS, Board of Scientific Counselors established, 1981
USPHS, cerebral vascular disease research, 78
USPHS, Dr. Lowry appointed deputy chief of Bureau of Medical Services, 1723
USPHS, Dr. O. L. Harrison: assistant surgeon general for personnel and training, 379
USPHS, Dr. Porterfield appointed deputy surgeon general, 1290; 1975
USPHS grants, 74; 78; 173; 263; 264; 707; 708; 819; 850; 851; 858; 1463; 1611; 1843; 1976; 2095; 2206; 2210
USPHS grants and awards, education values of, 1437
USPHS, increase in potency for monovalent Asian influenza vaccine, 1610
USPHS National Advisory Committee on Chronic Illness and Health of the Aged, 1847
USPHS neuropharmacology research center organized, 858
USPHS psychopharmacology information service, 1613
USPHS, public health officers and A. M. A. Asiatic influenza program report, 166
USPHS recommends selective basis for mass x-ray survey for tuberculosis, 1980
USPHS research facilities, 1140
USPHS survey of national health, advisory committee on, 1723
USPHS survey of opinion on nursing care, 1978
USPHS travel fund for International Ophthalmology Congress, 1981
workers, grants for training, 173
World Health Organization: See World Health Organization
HEARING
fellowships at Northwestern U., 618
restoration and conservation in otosclerosis, [Lempert] *229
test, type to use in congenital hearing impairment, 1647
tests on school children, Israel, 625
HEART
Anomalies: See also Ductus Arteriosus, patent; Heart disease (congenital)
anomalies, atrial and ventricular septal, surgical treatment, [Cooley] 1502—ab
anomalies, atrial septal, diagnosis and differential diagnosis [Bayer] 286—ab
anomalies atrial septal, in children, [Wagner] 1338—ab
anomalies, atrial septal, open repair, [Lewis & others] *922
anomalies, atrial septal, prognosis, [Campbell] 881—ab
anomalies, atrial septal, surgical treatment, [Bedford] 1189—ab
anomalies, atrial septal, symptomatology and pathophysiology, [Feilmann] 1078—ab
anomalies, closure with aid of hypothermia, [Thomas] 750—ab

V 16
1957

HEART—Continued
anomalies (congenital), etiology, [Sandrucci] 1201—ab
anomalies, tetralogy of Fallot, variability of clinical manifestations, [Holladay] 2008—ab
anomalies, ventricular septal defects, treatment, [Kay & others] *2168
arrest, elective, during cardiotomy, [Hale] 307—ab
arrest from potassium intoxication, restore normal sinus rhythm with artificial kidney, [Tu & Crockett] *1953
arrest one hour after pneumonectomy, [Hamel] 1503—ab
Artificial: See also Oxygenator-Pump
artificial, use of, Brazil, 1730
beat disorders, [Illustrated Film Reviews] *2112
block and conduction disturbances, isopropylarterenol for, [Schaub] 1344—ab
block, Morgagni-Adams-Stokes syndrome in infancy, [Bolletti] 1337—ab
block, successful electrical stimulation for 90 hours in Adams-Stokes disease, [Friesc] 286—ab
blood vs. femoral vein blood for postmortem alcohol determinations, (replies) [Harger] 725—C; (medicolegal problems), [Muehlberger] 726—C; [Turkel & Gifford] 1993—C
cardiac asthma, clinical observations, [Swineford] 1077—ab
cardiorespiratory syndrome of obesity, [Lillington] 1184—ab
catheterization of left chambers, technique and complications, [Soulié] 2116—ab
center for special studies at St. Luke's Hospital, Phoenix, 706
complications of Brazilian trypanosomiasis, 1730
disease and pregnancy, India, 179
disease (congenital), brain abscess with, [Gund] 1190—ab
disease (congenital), in adults, [Johnson & others] *915
disease (congenital), in infancy, differential diagnosis, [Wedum] *651
disease (congenital), institute for study, Ill., 73
disease (congenital), respiratory function in, [Gamalero] 1201—ab
Disease (Coronary): See Angina Pectoris; Arteries; Arteriosclerosis; Thrombosis
disease fatal, tobacco smoking and automobile-driving stress in relation to, [Mills] 1761—ab
disease, radioisotopes to determine cardiac output for diagnosis and control, 379
disease, rehabilitation, surveys, (medical directors in industry) [Lee & others] *787; (general practitioners) [Williams & others] *791
disease, research grants, (Calif.), 72; (Canada) 720
disease (rheumatic), physical medicine and rehabilitation in, [Newman] *1547
disease (rheumatic valvular) in adults, [Hwang] 2117—ab
disease (rheumatic valvular) without previous acute disease, penicillin for? 909
disease, temporary extracorporeal circulation for surgery, [Cooley] 630—ab
disease (valvular), problem of fever in, [Ross & others] *1
edema resistant to mercurial diuretics, treatment, [Mellemgaard] 395—ab
electrocardiogram in acute carbon monoxide poisoning, [Myschetzsy] 294—ab
electrocardiogram, significance of early T wave changes in coronary disease, [Burch] *1781
electrocardiogram, vectocardiogram and roentgenography to diagnose coronary disease, [Master] *1771
exsanguinated, surgery: experimental hypothermia in, [Goffrini] 189—ab
function tests, Master two-step, in coronary artery disease, [Russek] *1772
Heart-in-Industry Conference, Chicago, 614
hypertrophy, pulmonary insufficiency in etiology of cor pulmonale, [Rappaport & Mayer] *131
Infarction: See Myocardium
Inflammation: See also Endocarditis; Myocarditis; Pericarditis
inflammation (rheumatic) and mitral commissurotomy, [Kuprijanov] 298—ab
Insufficiency (congestive failure), hepato-jugular reflux in diagnosis and treatment, (Illustrated Film Review) [Bryant] *281
Insufficiency (congestive failure), warfarin sodium for, [Fremont & Jagendorf] *1381
interatrial communication, connection of right pulmonary veins to superior vena cava with, [Swan] 1183—ab
interatrial communication, test for [Lee] 396—ab
intra-atrial septum persistence in the aged, [Barboni] 301—ab
malrotation, pulmonary venous drainage of right lung into inferior vena cava with, [Steinberg] 2135—ab
HEART—Continued
monitor to detect and differentiate standstill, ventricular fibrillation or peripheral vascular collapse in surgery, [Simpson] 748—ab
muscles, diathermy advised or contraindicated? 1894
perforation of intraventricular septum due to myocardial infarction, [Dorney] 1077—ab
pseudoaneurysm of left ventricle, diagnosis by direct cardioangiography, [Smith] 2226—ab
Rate: See Pulse; Tachycardia
resuscitation, Belgium, 1297
roentgen study, safety of intravascular carbon dioxide in, [Durant] 2024—ab
Surgery: See also other subheads under Heart
surgery, cardiovascular changes during cooling and rewarming in total circulatory occlusion, [Blair] 417—ab
surgery, congenital, evaluation of electrocardiography during, [Smith] 416—ab
surgery, direct vision repair using rotating disc reservoir-oxygenator, [Cross] 101—ab
surgery, elective arrest during, [Hale] 307—ab
surgery for ruptured interventricular septum after myocardial infarction, [Cooley] 101—ab
surgery, India, 1173
surgery, open: anesthesia and surgical experiences, [Gibbon & others] *781
surgery, open: extracorporeal circulation in, [Pratt] 751—ab
surgery, physiological responses during total body perfusion with pump-oxygenator, [DeWall & others] *1788
surgery under hypothermia, coronary perfusion and carbon dioxide regulation in, [Spencer] 1187—ab
tumors, angiomyxoma, [Protheroe] 2131—ab
tumors, myxoma, intracavitary, diagnosis and treatment, [Bahnson] 631—ab
tumors, myxoma of left atrium: surgical removal under hypothermia, [Chin] 1189—ab
tumors, myxoma, preoperative diagnosis, [van Buchem] 401—ab
tumors, primary angiosarcoma, Kaposi's type, [Contreras] 2131—ab
tumor, primary reticulum cell sarcoma, [Kaufman] 2132—ab
tumors, primary sarcoma, [Faber] 629—ab
tumors, primary, surgical treatment, [Robertson] 1503—ab
vectocardiographic diagnosis of coronary artery disease, [Wolff] *1781
ventricular septum intact with valvular pulmonary stenosis, open valvuloplasty in, [Blount] 187—ab
viability, extension of limits of, with total coronary occlusion, [Webb] 1188—ab
wounds, ventricular septal, treated successfully, [Mahaffey] 2228—ab
HEAT
casualties, prevention of, [Minard & others] *1813
Therapeutic Use: See Diathermy
HEDULIN: See Phenindione
HEIGHT: See Body height
HEKTOEN INSTITUTE FOR MEDICAL RESEARCH
Diagnostic Problems at, [Kushner & Szanto] *1690; *2193
HELLER REPORT
on A. M. A. administrative changes, action on, at Philadelphia, 2091
HELMINTHIC DISEASES
treatment, dithiazanine, effective, [Swartzwelder & others] *2063
treatment, piperazine, [Schwartzwelder] 1754—ab
HEMANGIOMA
treated and untreated, [Andrews & others] *1114
visible, management, [Blackfield] 1637—ab
HEMATEMESIS
hemorrhage from upper gastrointestinal tract, [Weber & others] *1899
HEMATOLOGY: See Blood
HEMATOMA
Subdural: See Meninges
treatment, ultrasounds, Denmark, 721
HEMATURIA
care of severely injured patient: urologic aspects, [DeWeerd] *1916
HEMIBALLISMUS
prognosis, [Hyland] 753—ab
HEMIPELVECTOMY: See Pelvis, surgery
HEMODIALYSIS: See Kidneys, artificial
HEMOGLOBIN
abnormal, disease, and Salmonella osteomyelitis, [Silver] 2015—ab
copper sulfate test less than 85%, and blood donations, 2138
low in male, etiology, treatment, 2244
molecular diseases of, [Haynie] 100—ab
pneumonia causes fever in valvular heart disease, [Ross & others] *1
HEMOGRAMS, Belgium, 1297
HEMOLYSIS
intravascular, acute renal failure following, [Bull] 1499—ab
HEMOLYTIC DISEASE OF FETUS AND NEWBORN
ABO isoimmunization causes, [Sabin] 1340—ab
amino aciduria in, possible relation to kernicterus, [Nestel] 1507—ab
clinical experience with, [Beggs] *1237
hyperbilirubinemia as guide for use of exchange transfusions in, [Pierce] 1881—ab
prognosis: cord-blood hemoglobin, reticulocyte percentage and maternal antiglobulin titer in, [Kelsall] 1750—ab
replacement transfusion for, criteria for, amount of blood, 425
stillbirth due to, [Walker] 1748—ab
HEMOPHILIA
antihemophilic globulin deficiency with capillary defect, [Fessey] 2007—ab
antihemophilic globulin, United Kingdom, 872
diabetes mellitus with, incidence, 914
heredity and carriers, 2034
surgery in, use of animal antihemophilic globulin and human plasma, [Macfarlane] 1877—ab
vascular, in woman, [Thomas] 2226—ab
HEMOPHILUS
influenzae, United Kingdom, 871
HEMOPOIETIC SYSTEM
conditions resulting in pseudorheumatoid arthritis, [Davis] 1498—ab
origin of postoperative hypotension, [Barbour & Little] *1529
HEMOPTYSIS
painful knee and drop foot with, (Diagnostic Problems) [Kushner & Szanto] *2193
spurious, problem patients with Munchausen's syndrome, [Chapman] *927
HEMORRHAGE: See also specific organ or region
acute hemorrhagic cystitis with pleuropneumonia-like organisms, [Berg] 302—ab
fetal, into maternal circulation, neonatal anemia from, [Gunson] 1199—ab
in pregnancy, mortality from, United Kingdom, 627
into retina and vitreous, India, 1174
intra-abdominal, simulating reaction to contrast medium, death from, [Counts & others] *1134
pericarditis with, complicating recent myocardial infarction, [Dressler] 875—ab
postpartum, Sheehan's syndrome after, [Aarskog] 1881—ab
salicylic acid causes, Denmark, 721
self-induced, Munchausen's syndrome, [Reisner] 2108—C
transplacental, from fetus to mother, shock in newborn caused by, [Shiller] 1199—ab
HEPARIN
diuretic effect, particularly in nephrotic syndrome, [Majoor] 1494—ab
mast cells in production of, Brazil, 178
treatment of acute myocardial infarction, [Eastman] 303—ab
HEPATIC DUCTS: See Bile Ducts
HEPATITIS: See Liver inflammation
HEPATITIS, INFECTIOUS: See also "Homologous Serum Hepatitis" under Medicolegal Abstracts at end of letter M
after whole blood transfusions, [Katz] 304—ab
duration and rate of cure, factors influencing, [Jorke] 2223—ab
etiology and epidemiology of viral hepatitis, [Havens] *1091
hand disinfection in caring for patients with, 641
histologic changes studied by liver biopsy, [Thaler] 2119—ab
infantile, Peru, 1989
isolation for, 640
mosquitoes as possible vectors, 423
pathological anatomy, [Baggenstoss] *1099
posthepatitic cirrhosis, [Ratnoff] *1096
thymol turbidity test in screening of blood donors, [Jennings] 414—ab
transmission from dog bite? 1893
transmission, sterilization of needles to prevent, 1895
treatment, ACTH and cortisone, [Last] 731—ab
treatment, current status, (Council report) [Hanger] *1696
virus same as that which causes natural hepatitis, [Wiener & Wexler] 1075—C
HEPATO-JUGULAR REFLUX
hepatojugulameter for quantitative control of pressure and force over hepatic area in, [Burch] *1274
in diagnosis and treatment of congestive heart failure, (Illustrated Film Review) [Bryant] *281
HEPATOLENTICULAR Degeneration: See Lenticular Nucleus
HEPTALDEHYDE
breast cancer detected by? 639
HEREDITY: See also Families; Twins
aspects of gonadal dysgenesis and sex inversion in man, [Witschi] 900—ab

HEREDITY—Continued
attempts to induce mutations, France, 1299
biochemical genetics, drug reactions and enzymes, (Council report) [Motulsky] *835
counseling service at U. of Alberta, 719
degenerative neuromuscular disease, retinitis pigmentosa, and acanthocytosis, [Kornzweig] 1642—ab
genetic approach to infantile amaurotic idiocy, [Kozinn] 1083—ab
hereditary disease found in 2 of 3 children, pregnancy advisable after? 764
hereditary disorder with nephrolithiasis: glycinuria, [de Vries] 2234—ab
hereditary ectodermal dysplasia of anhidrotic type, [Rowen] 1509—ab
hereditary episodic adynamia, [Kaplan] 1331—ab
hereditary hemorrhagic telengiectasia, [Bird] 1320—ab
hereditary leptocytosis, India, 1734
hereditary pancreatitis, [Gross] 1320—ab
hereditary Peutz-Jeghers syndrome, [Rohrs] *208
hereditary renal disease with nerve deafness and ocular lesions, [Goldbloom] 1751—ab
inherited defect in 3 generations, outlook for 4th, 201
lactation and, United Kingdom, 1303
studies in Hodgkin's syndrome, [De Vore] 1869—ab
2 anencephalic monsters born to woman with 2 normal children, possibility of further occurrence, 311

HERMAPHRODITISM
true, sex chromatin pattern in seminiferous tubule dysgenesis relation to, [Grumbach] 500—ab

HERNIA
diaphragmatic, transportation of newborn infants for surgery of, [Bishop] *1230
hiatus, complicated by peptic esophagitis, [Lindskog] 1319—ab
hiatus, in children, [Engberg] 1341—ab
inguinal, bilateral, in girl, 6; surgery for, 424
repair, persistent pain after, quinine and urea hydrochloride for, (reply) [Watson] 642

HERPANGINA
parotitis with, presence of Coxsackie virus in, Canada, 623; [Howlett] 875—ab

HERPES
simplex infections; clinical aspects, diagnosis, epidemiology, [Vivell] 889—ab
zoster ophthalmicus, Finland, 86
zoster, pain after; etiology, treatment, 313

HEXAMETHONIUM
toxicity; intestinal roentgen findings, [Ettman] 415—ab
treatment of arterial hypertension, [Rønnov-Jessen] 1080—ab

HEXAMETON: See Hexamethonium

HEXETIDINE
N. Y., 1142

HIBERNATION, ARTIFICIAL: See also Hypothermia, Artificial
serotherapy with, for tetanus, [Diaz Cano] 1346—ab

HIGHSTEIN, GUSTAV, honored as artist, exhibit tours, 56

HILL-BURTON ACT: See under Hospitals

HINMAN, FRANK, JR., honored as artist, exhibit tours, 56

HIOBEX: See Hexamethonium

HIP
Fracture: See Femur fractures
prosthesis, transfixion, [Lippmann] 1196—ab

HIRSCHSPRUNG'S DISEASE: See Colon, megacolon

HISTAMINE
determination in carcinoid, [Pernow] 879—ab
fixation, Austria, 2104
inactivation power of blood serum in rheumatic fever, [Parrot] 415—ab
mast cells in production of, Brazil, 178
treatment of ichthyosis? 204; (reply) [Ewing] 2142

HISTOPLASMOSIS
chronic progressive cavitary, diagnosis, [Lehan] 287—ab
oral, local nystatin for, [Plotnick & Cerri] *346
pulmonary, chronic, chemotherapy, [Sutliff] 286—ab
pulmonary, chronic progressive, surgical treatment, [Polk] 2009—ab
pulmonary, VA study, 78

HISTORY
of history series on U. S. Army Medical Department in World War II, [Coates] *241

HOBBIES: See Physicians, avocations

HODGKIN'S DISEASE
blood iron, copper, and transferrin levels in, Austria, 85
creation of Jane Bender Goodman Hodgkin's Disease Research Fund, Mo., 2094
hereditary and epidemiologic aspects, [De Vore] 1869—ab

HODGKIN'S DISEASE—Continued
symptomatology and treatment results, [Hellmeyer] 1185—ab
treatment, CB 1348 and R-48, [Rottino] 2005—ab

HOME CARE
programs available from A. M. A., 1283

HOMEOSTASIS
in management of nephrotic syndrome, [Talbot] 303—ab

HOMICIDE: See Murder

HOMOSEXUALITY
committee considers law and practice, United Kingdom, 1175

HOOKWORM: See Ancylostomiasis

HORMONES
adrenal cortex cancer without endocrine effects, [Wood] 2231—ab
aspects of gonadal dysgenesis and sex inversion, [Witschi] 900—ab
Growth Hormone: See Somatotrophin
imbalance with sweating in woman 54 after pelvic surgery, treatment, 2031
sex, for menopause after removal of breast cancer? 118
treatment of breast cancer, annual report, 1002

HOSPITALS: See also Medicolegal Abstracts at end of letter M
accident burden on, 838—E; (Bureau article) 846
Accreditation: See also Joint Committee on Accreditation of Hospitals
accredited for 3 years, "You Can Have Confidence in Your Hospital," sent to, 162
administrators, inaugurate advanced program at Cornell U., 1716
Air Force, accreditation program, 173
Air Force, new, (photos) 1289; 1609; 1722
architecture and techniques, first international seminar on, 2097
autopsy rates, highest, internships in, 457
Baylor 2-million-volt x-ray unit, 2095
bed capacity, internships by, 455
bed capacity, residencies by, 460
bill, N. Z., 1073
blankets, cleaning of, United Kingdom, 1176
cancer, in Columbia, Mo., "cobalt bomb" at, 1976
care, free for beneficiaries under Social Security, big, big decade of 1958, 1568—E
care in old age financed by Social Security, A. M. A. task force to study, 841; 1283; (President's page) 1701
care of premature infants, evaluation of standards for, [Rider & others] *1233
central air-conditioning in, hazards of airborne infections, 1359
Central Islip State, treatment unit for mentally ill children at, N. Y., 2207
clinical laboratory and roentgen ray department, Joint Commission report on, 160
control type, internships by, 454
control, type, residencies by, 460
courtesy to relatives of dying patients, Norway, 870
emergency, disaster training, N. Y., 1158
emergency service, initial treatment of burns in mass casualties, [Brown & Glover] *843
employees health programs, discussed at A. M. A. Council meeting, 1705
expense insurance, Blue Cross, [Barth] 2108—C
expense insurance, economic tolerance, (Council article) [Irwin] *1574
expense insurance, government; to be operated by Blue Cross, Canada, 1070
expense insurance, medical society approved, annual report on, 1035
expense insurance, voluntary, Canada, 623
general, staphylococcic infections in, [Wysham & Kirby] 164:1733, Aug. 17, 1957; (correction) 165:171, Sept. 14, 1957
Guy's, Ministry of Health approved rebuilding, including medical school, United Kingdom, 390
Hill-Burton Act amendments, Committee annual report on, 988; (progress) 1045
Hill-Burton program, Minnesota plan revised, 2094
Hospital for Joint Diseases, alumni special memorial meeting for Dr. Kleinberg, N. Y., 1159
Hospital of Saint Raphael, New Haven, 50th anniversary, Conn., 261
inflation and medical care, 601—E
Interns: Internships: See Interns and Internships
King Edward's, fund, United Kingdom, 1074
Lenox Hill, plans for complete renovation and modernization of, N. Y., 1284
local, and psychiatrists in mental health, 1961
Memorial Center for Cancer and Allied Diseases, New York, fellowship in neoplasia, 1465
mental, accreditation begins in 1958, 161
mental, as therapeutic community, VA program, 78
mental, clientele changing, Denmark, 1732

HOSPITALS—Continued
military, tuberculosis treatment in, [Burke] 877—ab
Montefiore and Medical Center, allergy residency in, Pa., 1159
Mountainside, expands rehabilitation department, N. J., 1602
New England Center, Boston, establishes department of infectious diseases, 262
New York Hospital, classes for diabetic patients at, 2094
New York U.-Bellevue Medical Center, gifts for building, 1463; 1716; 1976
nursery, psychic behavior of infants kept in, [Bertoye] 1200—ab
nursery, staphylococcal infections: pyoderma neonatorum, [Wysham] 1747—ab
obstetric unit, staphylococcal infections: puerperal mastitis, [Wysham] 1747—ab
personnel, Joint Committee on Health Program for, annual report, 1006
physics, training in, India, 1733
portable chair-scale for, [Silverman & Ikefugi] *826
Presbyterian and St. Luke's consolidated, Chicago, 1063
Residents: Residencies: See Residents and Residencies
routine measurement of respiratory rate, expensive tribute to tradition, [Kory] *448
running costs, United Kingdom, 1736
St. Luke's, Chicago, appoints medical education director, 614
St. Luke's, Phoenix, center for special heart studies, 706
St. Mary's, San Francisco, appoints medical education director, 370
Scottish teaching hospitals, 1303
staffing, United Kingdom, 1304
Stuttgart Memorial, dedicated, Ark., (photo) 2205
survey program, annual Council report on, 1030
U. S. Naval, first nuclear reactor in hospital dedicated, 2210
University of Wisconsin, activate respiration center, 1845
V. A., changes, 857; 2210
V. A., modify admission procedures, 1039

HOUSING
basic need of senior citizens, (Council article) [Nicholson] *1058

HOUSSAY PHENOMENON
[Calvert] 1494—ab

HUMERUS
shaft fractures, Canada, 1732

HUMIDITY
of operating rooms, 764

HUMOR (body fluids)
origin of postoperative hypotension, [Barbour & Little] *1529

HUTCHISON-PEPPER SYNDROME: See Neuroblastoma

HYALASE: See Hyaluronidase

HYALINE MEMBRANE DISEASE
in infants weighing 2,000 grams and over, roentgen findings, [Ellis] 2024—ab

HYALURONIC ACID
mast cells in production of, Brazil, 178

HYALURONIDASE
intrakeloidal injection after burns, 1516

HYAZYME: See Hyaluronidase

HYDELTRA: See Prednisolone

HYDERGINE
combined intra-arterial therapy of lesions caused by peripheral arterial disease, [Recattini] 1345—ab

HYDRALAZINE
syndrome: hypersensitivity or toxicity: significance in understanding collagen disease, [Reynolds & Caldwell] *1823

HYDRAZONES
Vetazide-related, antituberculous activity, [Rubbo] 2235—ab

HYDRAULIC EQUIPMENT
device to control injection during carotid angiography, [Epstein & Epstein] *679

HYDROCALICOSIS
congenital cystic, [Fink] 1084—ab

HYDROCEPHALUS
in newborn from toxoplasmosis, pregnancy advisable after? 1221

HYDROCORTAMATE HYDROCHLORIDE
N. N. D., 156

HYDROCORTISONE
effects on water diuresis and renal function, [Raisz] 398—ab
Fluoro-: See Fludrocortisone
hemisuccinate sodium locally for ulcerative colitis, [Truelove] 1209—ab
treatment, injection into keloid, 1516
treatment (intravenous) in grave intoxications and shock, [Andersen] 1887—ab
treatment of Dupuytren's contracture, France, 1299
treatment of nephrotic syndrome, [Goodman & Baxter] *1798
treatment of otitis externa, advisability, 421

V 165
1957

HYDROCORTISONE—Continued
treatment of postoperative acute adrenal insufficiency, [Adams & Siderius] *31
treatment of tennis elbow, [Baily] 1211—ab
treatment of tick paralysis, [Wilkes] 874—C
treatment plus, oxytetracycline in ophthalmology, [Berman] 2019—ab
treatment, (topical) in pleural effusion, [Miglio] 2119—ab
HYDROCORTOLE: **HYDROCORTONE**: See Hydrocortisone
o-HYDROXYBENZAL ISONICOTINYLHYDRAZINE: See Isonicotinic Acid Hydrazides
17-HYDROXYCORTICOSTERONE: See Hydrocortisone
5-HYDROXYINDOLEACETIC ACID (5HIAA) determination in carcinoid, [Pernow] 879—ab
HYDROXYSTILBAMIDINE ISETHIONATE
N, N′-D-, 1143
5-HYDROXYTRYPTAMINE: See Serotonin
HYGIENE
Industrial: See Industrial Hygiene
HYLAND COMMITTEE study of proposed A. M. A. administrative changes, action at Philadelphia, 2091
HYOID BONE
tongue-larynx column deficiencies, disability after poliomyelitis, [Bosma] *216
HYOSCINE: See Scopolamine
HYPAQUE: See Diatrizoate Sodium
HYPERHIDROSIS
palmaris, treatment, familial disease in Japanese, [Cloward] 289—ab
paravertebral alcohol block of lumbar sympathetic nerves for, [Roedling & others] *799
HYPEROSTOSIS
generalisata of Camurati-Engelmann type, [Reith] 397—ab
HYPEROXALURIA: See Urine oxalate
HYPERPARATHYROIDISM: See Parathyroid
HYPERSENSITIVITY: See Allergy
HYPERSPLENISM: See Spleen: Splenomegaly
HYPERTENSION: See Blood Pressure, High
HYPERTHYROIDISM
acute leukemia after I^{131} for, [Werner & Quimby] *1558
false diagnosis, [Jackson] *1533
pregnancy and, [Battarino] 296—ab
HYPERTRICHOSIS: See Hair, excessive
HYPERVENTILATION: See Respiration
HYPNOSIS
for postgastrectomy dumping syndrome, [Leonard & others] *1957
medical use, Council annual report on, 994
scope in general practice, [Fry] 294—ab
HYPNOTICS: See Sedatives
HYPOPHOSPHATASIA: See Phosphatase
HYPOPHYSECTOMY: See Pituitary exclusion
HYPOTENSION: See Blood Pressure, low
HYPOTHERMIA, ARTIFICIAL: See also Hibernation, Artificial
cardiovascular changes during, in total circulatory occlusion, [Blair] 417—ab
closing of atrial septal defects with aid of, [Thomas] 750—ab; [Lewis & others] *922
coronary perfusion and carbon dioxide regulation in intracardiac operations performed under, [Spencer] 1187—ab
for open heart surgery, [Keown & others] *781
in intracranial tumors, [Inglis] 399—ab
pharmacological asystole in surgery of exsanguinated heart, [Goffrini] 189—ab
successful surgical removal of myxoma of left atrium under, [Chin] 1189—ab
surgery for congenital valvular pulmonary stenosis during, [Derra] 290—ab
sympathetic depressors effect on induction time and renal effects, [Moyer] 2135—ab
value during aortic occlusion, [Grosskreutz & others] *949
HYPOTHYROIDISM: See also Cretinism
diagnosis, treatment, [Jackson] *121; (reply) [McSweeny] 726—C
false diagnosis of hyperthyroidism, [Jackson] *1533
Its Pathognomonic Diagnosis and Its Treatment, (Illustrated Film Review) [Starr] *1311
joint involvement in, etiology, treatment, 1225
HYTAKEROL: See Dihydrotachysterol

I

IBM MACHINES
A. M. A. Machine Records System Department, annual report, 1024
ICED drinks postoperatively, 1770
ICHTHYOSIS
treatment, corticosteroids or histamine? 204; (reply) [Ewing] 2142
ICTERUS: See Jaundice
ID REACTION
allergic dermatoses, [Rostenberg] *1118
IDENTIFICATION
seek, of brutally murdered boy, 4 or 5, Philadelphia, (photo) 617
IDIOCY
amaurotic, establish foundation for Tay-Sachs' disease, 2097
infantile amaurotic family, genetic approach, [Kozinn] 1083—ab
ILLEGITIMACY
blood tests and, United Kingdom, 275
ILLUSTRATED FILM REVIEWS: See under Moving Pictures, Medical (Reviews)
ILOTYCIN: See Erythromycin
IMMUNIZATION
in patient with nephrosis, 424
mass, A. M. A. policy on, 202
various routes, especially for tetanus toxoid, (replies) [McComb; and original consultant] 1519—1520
IMMUNOLOGY
Canadian Indian and, 720
IMPOSTORS: See Quackery
IMPOTENCE
treatment, 203
IMPREGNATION
artificial, format of medicolegal forms for, [Medicine and the Law] *2367
INCLUSION DISEASE: See Cells
INCOME TAX: See Tax, income
INDEXES: See also A. M. A. JOURNAL; A. M. A. QUARTERLY CUMULATIVE INDEX MEDICUS
Standard Nomenclature punched-card, locate tumor diagnoses in, [Vermillion] *2181
INDIANS, AMERICAN
Canadian, and immunology, 720
INDIGENT: See Medically Indigent
INDUSTRIAL ACCIDENTS: See also Workmen's Compensation
eye damage from lye, 1896
need for valuation of capability after, [Yamshon] *934
INDUSTRIAL DERMATOSES
A. M. A. Committee on, annual report, 1007
chromate, India, 1300
INDUSTRIAL DISEASES
A. M. A. Committee on Occupational Cancer, annual report, 1007
arc welders' lungs, United Kingdom, 1859
aspects of amyotrophic lateral sclerosis in boiler cleaner, 2141
bakers' and millers' asthma, etiology and pathogenesis, [Khunkov] 635—ab
bladder cancer from handling benzidine, United Kingdom, 275
blood cholinesterase test after organic phosphate insecticide exposure, 315
breathless coal workers, [Martin] 636—ab
chronic degeneration of brain in worker exposed to formaldehyde and methyl alcohol, etiologic relationship? 1354
deafness in ship builders, Finland, 86
electric motor cleaners toxicity, thorax pain from: 1768
in tanning industry, [Keru] 117, 1648
India, 1967
in-flight hyperventilation during jet pilot training, [Balke] 905—ab
Pneumonoconiosis, Silicosis: See Pneumonoconiosis
poliomyelitis-like neuromyasthenia in student nurses, [Shelokov] 2026—ab
psychosomatic disorders in pilot trainees, [Phillips] 1880—ab
throat irritation from cleaning television tubes? 908
toxicity in plastic manufacture, 201
tuberculosis among workers in medical laboratories, [Reid] 1347—ab
tuberculosis, financial aid to miners with, India, 1733
tuberculosis in BCG-vaccinated nurses, [De-Frisz] 1760—ab
USPHS industrial cancer research, 1290
vanadium poisoning in oil-fired boilers, United Kingdom, 723
INDUSTRIAL HEALTH
A. M. A. Committee on Industrial Nursing, annual report, 1006
A. M. A. Council on Industrial Health, (annual report) 1065; (meeting report) 1765
cardiac rehabilitation, questionnaire survey, [Lee & others] *787; [Williams & others] *791
congress, A. M. A. sponsors, Milwaukee, Jan. 27-29, 1958, 811; 1832
evaluation of capability after injury, [Yamshon] *934
exposure of eyes to soldering fumes, 764
graphite toxicity, pneumonoconiosis, (replies) [Liber; and original consultant] 914
guiding principles for evaluating management and union health centers, annual report on, 1041
Heart-in-Industry Conference, Chicago, 614
inhalation of barium carbonate, hazards in manufacture of tile blocks, 913
medical director's role in major medical expense insurance, (Council article) [McNamara] *1586
medicine, Atomic Energy Commission fellowships in, 1980
medicine, fellowships at U. of Cincinnati, 1605
INDUSTRIAL HEALTH—Continued
mental health in industry, 1961
National Safety Congress, A. M. A. co-sponsors session on vision in industry, 354
physical medicine and rehabilitation in rheumatic heart disease, [Newman] *1547
programs, "primer" in preparation, annual report, 1008
programs: statement on scope, objectives, and functions, 1007
state medical society committees, joint conference, 1007
vocational guidance for long-term VA patients, 78
worker effectiveness and frontal lobotomy, 1359
workers longevity increases, 1718
workers, medical care for, A. M. A. Committee annual report on, 1006; 1040
INDUSTRIAL HYGIENE
A. M. A. Committee on Plant Hygiene Studies, annual report, 1006
metal corrodes after handling with sweaty hands, counteract condition? 1647
INDUSTRIAL MEDICINE: See Industrial Health
INDUSTRIAL TRADE UNIONS: See United Mine Workers of America
INFANTS
adrenaline-secreting neuroblastoma in, [Mason] 2017—ab
aganglionic megacolon in, management, [Sieber] 1875—ab
air travel by, problems in, [Spiegel] *205; (reply) [Lederer] 1187—C
blood pressure determination in, evaluation of flush method, [Moss] 1199—ab
cancer of pancreas in, pancreatoduodenectomy for, [Becker] 744—ab
coarctation of aorta and patent ductus arteriosus in, [Goldring] 1203—ab
congenital cystic hydrocalicosis in, [Fink] 1081—ab
congenital heart disease in, differential diagnosis, [Wedum] *651
congenital macroglossia in, treatment, 2243
defects, frequency after maternal rubella, [Greenberg & others] *675; 688—E
dehydration, acute, in, Peru, 1990
exophthalmos in infant born of mother taking thyroid, 198
feeding, evaporated milk in, [Moss] 1202—ab
feeding, (India) 387; (United Kingdom) 723
feeding, tuna fish allergy 2 days after eating: 198
intussusception in, management, [Langlet] 745—ab
kept in nursery, psychic behavior, [Bertoye] 1200—ab
kwashiorkor or dystrophy in, duodenal enzymes with, [Russo] 890—ab
listerial meningitis in, [Edmunds] 1507—ab
monilial infections fatal in, [Nezelof] 2015—ab
moniliasis in, [Doblas] 2123—ab
Morgagni-Adams-Stokes syndrome in, [Bollett] 1337—ab
Mortality: See also Stillbirth
mortality in Cook Islands, N. Z., 1072
mortality (perinatal) and morbidity study program, annual report on, 1041
mortality (perinatal), Peru, 1989
nitrite poisoning in, United Kingdom, 1991
nursing, interstitial pneumonia in, [von Berlin-Helmendahl] 1339—ab
obstructive emphysema in, [Valledor] 301—ab
"passing-out," cause and treatment, [Lanson] 759—ab
pneumonopathy due to staphylococcus in, [Benevolo] 109—ab
premature, anemia in, therapy, [Pototschnig] 301—ab
premature, nonerythroblastic kernicterus in, [Hottinger] 1882—ab
premature, Norway, 1301
premature, standards for hospital care of, [Rider & others] *1233
prematurity, statistics on, Peru, 1988
prot in-bound iodine values for, 2141
psychiatry, drug therapy in, 1474
pulmonary arteriosclerosis of unknown etiology in, [Cawley] 2132—ab
pulmonary hypertension, primary, in, [Rosenberg] 2014—ab
pyloric stenosis incidence in, [Laron] 1338—ab
respiratory disease (acute) in, [Taylor] 194—ab
reticuloendotheliosis in, [Sanford] 301—ab
INFANTS, NEWBORN: See also Fetus
afibrinogenemia in, [Grossman] 298—ab
anemia due to fetal hemorrhage into maternal circulation, [Gunson] 1199—ab
asphyxial syncope in, intrafunicular blood transfusion for, [Marchesoni] 888—ab
BCG vaccination of, exposure to and development of tuberculosis after, [Dannenbaum] 758—ab
Birth Rate: See Vital Statistics
cancer in, [Beckett] 890—ab
Candida infection fatal in, [Nezelof] 2015—ab
defects in, after mumps during pregnancy, [Holowach] 299—ab

INFANTS, NEWBORN—Continued
epidemiologic studies of staphylococcal pyoderma neonatorum, [Wysham] 1747—ab
Hemolytic Disease of (Erythroblastosis): See Hemolytic Disease
more, inflation and medical care, 601—E
Mortality: See Infants, mortality; Stillbirth
multicystic kidney (unilateral) associated with maternal rubella, [Lipton] 298—ab
nephrotic syndrome in, [Gilles] 633—ab; [Gruskay] 1508—ab
Nursery for: See Hospitals, nursery
placental transmission of poliomyelitis antibodies in, [Strean] 1748—ab
poliomyelitis, viremia in, [Winsser] 2125—ab
Premature: See Infants, premature
regional and general anesthesia in obstetrics effects on, [Apgar & others] *2155; 2198—E
renal-vein thrombosis in infants of diabetic mothers, [Avery] 407—ab
resuscitation, obstetric analgesia and anesthesia in general practice, [Bonica] *2146
shock from transplacental hemorrhage from fetus to mother, [Shiller] 1199—ab
stomach perforation in, postoperative wound evisceration and survival, [Abramson] 2124—ab
stomach ruptures spontaneously in, [Moore] 2229—ab
transportation of, for emergency surgery, [Bishop] *1230
weighing 2,000 grams and over, hyaline membrane disease in: roentgen findings, [Ellis] 2024—ab
INFECTION: See also specific organ or region, as Respiratory Tract
air-borne, hazards due to central air conditioning in hospital, 1359
anaerobic, antibiotics for, [de Lavergne] 898—ab
anaerobic, in humans, Canada, 1172
complicating prednisolone and prednisone therapy in allergy, [Bukantz & Aubuchon] *1256
complicating stomach surgery, mechanism of peritonitis, [Sahlin] 1876—ab
from pillows, epidemiology, 1222
recurring infectious thrombophlebitis with suprapubic pain and frequent urination, treatment, **164**:1857, Aug. 17, 1957; (correction) **165**:711, Oct. 12, 1957
resistant pelvic, cortisone and antibiotics for, [Hurtig] 191—ab
Torulopsis glabrata: frequency increases, identification, [Wickerham] *17
treatment, sulfonamide-sulfone combination, [Dettori] 896—ab
INFECTIOUS DISEASES
from ingestion of raw liver: 1518
INFERTILITY: See Sterility
INFLATION and medical service, 600—E
INFLUENZA
antibiotics and, 53—E: (Special Committee report) 58
Asian, 352—E: (Special Committee report) 356
Asian, antibiotics and: current status, 53—E: (Special Committee report) 58; 59
Asian, artificially induced in vaccinated and unvaccinated volunteers, [Bell & others] *1366
Asian, epidemic aboard military sea transport, [Schreiber] *1683
Asian, (N. Z.) 869; (Italy) 1470; (United Kingdom) 1625
Asian, panel discussion, Philadelphia, 708
Asian, preliminary findings of vaccination against, [Sig.l & others] 1860—C
Asian, protective effect of monovalent vaccine in, [Culver & others] *2474
Asian, report to Medical Societies for control of, 689—E: (Special Committee) 691
Asian, U. S. servicemen vaccinated against, United Kingdom, 390
Asian, vaccination, basis for recommendations and preliminary report on efficacy, *2055
Asian, vaccine, danger and opportunity in regard to, 1152—E
Asian, vaccine intracutaneously, [Tuft] 278—C; [Sadusk] 1860—C; [Love] 1861—C
Asian, vaccine potency requirements increased, 1610
Asian, vaccine, subcutaneously and intradermally, [Boger & Liu] *1687
Asian, vaccine, United Kingdom, 1174; 1856
Asiatic, report of A. M. A. meeting with USPHS and public health officers, (Special Committee report) 166
Asiatic, WMA program, (Medicine at Work) [Goiin] *19
epidemic, India, 1620
Hemophilus, United Kingdom, 871
in children, India, 1471
morbidity and mortality statistics, 1953–56, United Kingdom, 871: [McDonald] 1761—ab
myocarditis during childhood, [Muller] 1750—ab
Russian, United Kingdom, 1625
treatment, cortisone and antibiotics, Chile, 1620
virus, United Kingdom, 388
INH: See Isoniazid
INHALATION
of barium carbonate, hazards in manufacture of tile blocks, 913
of grass spikes, United Kingdom, 724
INJECTION
hydraulic device to control, during carotid angiography, [Epstein & Epstein] *679
intra-arterial therapy in intermittent claudication, [Bennet-Jones] 1322—ab
intracutaneous Asian influenza vaccine, [Tuft] 278—C; [Sadusk] 1860—C; [Love] 1861—C
intramuscular warfarin sodium, [Shapiro & Ciferri] *1377
intravenous fat emulsion, [Mueller] 1886—ab
intravenous nor-epinephrine, tissue necrosis after, [de Alvarez] 1878—ab
intravenous PAS–streptomycinpantothenate in tuberculosis, [Kuntz] 1346—ab
intravenous prednisolone hemisuccinate in asthma, [Sleuteri] 110—ab
multiple, of benzathine penicillin G, reactions from, [Sherwood & others] *667
subcutaneous and intradermal Asian influenza vaccine, [Boger & Liu] *1687
transcystoscopic, of bladder tumors with radioactive colloidal chromic phosphate, [Christensen] 1640—ab
various routes of immunization, especially for tetanus toxoid, (replies) [McComb; and original consultant] 1519; 1520
INK
printer's, allergy to, desensitization possible? 1768
INSANITY: See Mental Disorders; Schizophrenic Reactions; Medicolegal Abstracts at end of letter M
Manic-Depressive: See Psychosis
INSECTICIDES
organic phosphate, blood cholinesterase test after exposure, 315
INSEMINATION: See Impregnation
INSOMNIA: See Sleep
INSTITUTE: See also Societies and Other Organizations at end of letter S
of Biochemistry of Faculty of Medicine of Lima dedicated, Peru, 86
of Cancer Research reports 1st British cesium unit, 88
INSTRUMENTS
perforation of esophagus by, primary esophagogastrectomy for, [Blalock] 2121—ab
Shelden tracheotome perforates trachea, [Smith] *2071
tracheotomy, new rapid, [Salvatore & Maloney] *2077
INSULIN: See also Diabetes Mellitus
allergy, indication for tolbutamide, (reply) [Engelsher] 278—C
metabolism modification by, Austria, 1618
INSURANCE
Blue Cross and Blue Shield, [Barth] 2108—C
government hospital, Blue Cross to operate, Canada, 1070
health, Committee report on, 988
health, economic tolerance of, (Council article) [Irwin] *1571
health, pre-retirement financing, annual report on, 1036
health, voluntary lay-sponsored plans, A. M. A. annual report on, 1035
hospital and medical, voluntary, Canada, 623
Hospitalization: See also Hospitals, expense insurance; Medical Service plans
major medical expense, its development and problems, (Council article) [Follmann] *1578
major medical expense, role of medical director in, (Council article) [McNamara] *1586
medical and hospital prepayment service, Committee annual report, 1035
medicine, from claim files, [Dimmick] 1305—C
noncancellable and guaranteed renewable, underwriting considerations, (Council article) [Horan] *1592
plans for mental patients, 1961
INTELLIGENCE
borderline, phenylketonuria with, [Hsia] 757—ab
normal, phenylketonuria with, [Bickel] 108—ab; [Coates] 1882—ab
INTERNATIONAL: See also list of Societies at end of letter S
College of Surgeons established medical history Hall of Fame, [Thorek] 1187—C
congress on wine and alcohol, France, 377
Cooperation Administration, medical foreign aid programs, 954—E
exchange of students, 1430
Ophthalmology Congress, Brussels, Sept., USPHS travel fund for, 1981
Proctologic Congress, first, Dec. 1–8, Argentina, 266: 1721
Seminar on Hospital Architecture and Techniques, first, 2097
seminars in mental health, 375
symposium on radioactive isotopes, third, Austria, Jan. 7–10, 1958
INTERNS AND INTERNSHIPS: See also Medicolegal Abstracts at end of letter M
INTERNS AND INTERNSHIPS—Continued
Air Force sponsored internships, civilian and military, 1450
A. M. A. Council annual report on, 1028
approved internships, annual report and directory, 453; 461: (by type of service) 481; 602—E: (future of internship) 604—E
draft status of interns, 1442
foreign interns in U. S., 852: [McCormack & Feraru] *1388
in Canada, hospitals approved for, 482
Internship Review Committee, 457: (in evaluating graduate education) 603—E; (annual report) 1029
internship stipends, 456
military intern program, 1445
National Intern Matching program, 457
naval internships, 1447
number, Oct. 5, 453; 602—E
straight internships, 458
straight vs. rotating internships, 1100
INTERSEXUALITY: See Hermaphroditism
INTESTINES
carcinoid with hepatic metastases and cardiovascular complications, [Picard] 396—ab
diverticulum, Meckel's, Canada, 1732
eosinophilic infiltration of, [Ferrier] 1079—ab
inflammation (regional enteritis), A. M. A. symposium on, (diagnosis and clinical course) [Collins] *2042; (nonsurgical management) [Bargen] *2045; (surgical viewpoint) [Ferguson] *2048; (pathologic anatomy) [Laipply] *2052
inflammation, staphylococcal enterocolitis, [Lepley] 1876—ab; (from antibiotics) [Bassl] 398—ab
intubation, abuse, [Farrel] 882—ab
motility, pantothenyl alcohol to stimulate after surgery? 763
obstruction, nonabsorbable water-soluble contrast mediums in diagnosis, [Epstein] *11
obstruction, transportation of newborn infants for surgery for, [Bishop] *1230
Parasites: See also Helminthic Diseases; and under specific parasitism as Ascariasis
parasitism, Peru, 1987
polyposis, familial, report of large family, [Turner] 1328—ab
polyposis, generalized, with melanoplakia of lips, oral mucosa and fingers, [Richterich] 732—ab
INTOXICATION: See Poisoning
INTUSSUSCEPTION
in infants and children, management, [Lanzkt] 745—ab
INVENOL (carbutamide): See Sulfonylureas
INVERSINE: See Mecamylamine
IODINE
In Blood: See Blood Iodine
radioactive, for hyperthyroidism, acute leukemia after, [Werner & Quimby] *1558
radioactive, for thyrotoxicosis, [Atabek] 395—ab
radioactive, in diagnosis of lingual thyroid, [Carvalho] 2026—ab
radioactive, profile in diagnosis of thyroid disease, [Rubenfeld] 1743—ab
radioactive, therapy, abortion following, etiologic relationship, 2244
IODIZED OIL
residual, in back, cause vague aches and pains? 114
IODOPYRACET
in screening for unilateral renal disease and hypertension, [Winter] 1884—ab
ION TRANSFER
iontophoresis with copper sulfate, technique for chromoblastomycosis, 1897
IONTOPHORESIS: See Ion Transfer
IRON
ferric chloride urine test: mechanism, positive in phenylketonuria, leukemia, and what other diseases? 200
ferric chloride urine test to diagnose phenylketonuria, [Centerwall] 392—C; 2219—C
in blood in malignant diseases, Austria, 85
metabolism in polycythemia, Spain, 2107
ISCHEMIA
kidney, and local cooling in sheep, N. Z., 2215
local, from levarterenol leakage, piperoxan for, [Pelner] *444
ISOLATION for infectious hepatitis, 640
ISONIAZID
toxic effects during childhood, [Weingärtner] 1201—ab
toxicity combined with dihydrostreptomycin and PAS in tuberculosis, eczema, [Crissey & others] *1526
toxicity: psychosis, [Waterstradt] 1333—ab
treatment alternated with other drugs in tuberculosis of lung, including pyrazinamide, [Reale] 1316—ab
treatment plus aminosalicylic acid or streptomycin in laryngeal tuberculosis, [Wallner] 895—ab
treatment plus Nupasal-213 in tuberculosis of lung, toxic effects and cross-resistance, [Cuthbert] 1887—ab

V 16
1957

ISONICOTINIC ACID HYDRAZIDES: See also Isoniazid
o-hydroxybenzal, for tuberculosis of lung, [Cuthbert] 1887—ab
ISOPROTERENOL (isopropylarterenol)
treatment of Adams-Stokes attacks and disturbances of cardiac conduction, [Schaub] 1344—ab
ISOTOPES
Radioactive: See Radioactive isotopes; and under specific elements as Iodine, radioactive
ISRAEL MEDICAL ASSOCIATION
endocrinological research meeting on occasion of Herman Zondek's 70th birthday, 1071
ISUPREL: See Isoproterenol

J

J. A. M. A.: See American Medical Association Journal
JAPANESE
hyperhidrosis palmaris: familial disease in, [Cloward] 289—ab
Japanese brides to live in U. S., 1072
JAUNDICE
black liver, Mavero-hepatic icterus, [Bynum] 1493—ab
Epidemic: See Hepatitis, Infectious
etiology: chlorpromazine, continued use of drug, [Skromak] 1210—ab
etiology: chlorpromazine, small amounts, [Zarowitz] 418—ab
JAWS
giant chondroma of maxilla, hemifacial removal with enucleation of eye, [Garcia Blanco] 753—ab
JEJUNUM
surgery, pancreaticojejunostomy, [DuVal] 288—ab
JELLYFISH: See Fish
JENKINS-KEOGH BILLS
A. M. A. Committee annual report on, 988
JET TRANSPORT: See Aviation
JOINT
Blood Council survey of transfusions in U. S., *1135; 1154—C
Commission on Accreditation of Hospitals, (August *bulletin* report on clinical laboratory, x-ray department, mental hospital accreditation; and booklet for 3 year accredited hospitals) 160; (program for Air Force hospitals) 173; (A. M. A. Council annual report) 1030
Commission on Mental Illness and Health, (Rockefeller Brothers Fund grant to) 852; (Council annual report on) 994; (requests names of voluntary organizations of ex-mental patients) 1606
Committee on Fluoridation, annual report, 1000
Committee on Health Problems in Education, (programs on fitness of youth) 54—E; (correction) 377; (Bureau annual report on) 1021
JOINTS
cricoarytenoid, rheumatoid arthritis of, [Copeman] 880—ab
degenerative joint disease, prednisone, aspirin and placebo in, [Williams] 1755—ab
involvement in hypothyroidism, etiology, treatment, 1225
JOURNALS
Acta dermato-venereologica, supplement to publish dermatologic exhibition, 2096
Arthritis and Rheumatism: official bi-monthly journal of American Rheumatism Association in 1958, 1162
bulletin of Joint Commission on Accreditation of Hospitals, August report, 160
Canadian Journal of Surgery, Canadian Medical Association quarterly journal, new, 1163
Chronic Illness Newsletter, annual report, 1047
Drug Standards, monographs of tests and assays for new and non-official drugs in, 687
Journal of the A. M. A.: See American Medical Association
Journal of Applied Bacteriology special December issue contains papers of special symposium, 1845
Journal of the Iowa State Medical Society, August issue dedicated to Dr. Blerring, 706
Journal Strahlentherapie to publish third international symposium of radioactive isotopes, 1978
meeting of medical editors from 24 countries, United Kingdom, 1856
Pennsylvania Medical Journal, Dr. Lechner appointed editor, 2207
Public Relations annual report on magazine relations, 991
"This Week" magazine articles by A. M. A., annual report on, 1016
JURISPRUDENCE, MEDICAL: See Medical Jurisprudence

K

KARSNER, HOWARD T., honorary president of International Society for Geographic Pathology, 173
KARTAGENER'S SYNDROME
[Krejci] 1321—ab
KELOIDS
after burns, treatment, 1516
KEMADRIN: See Procyclidine Hydrochloride
KERATITIS
interstitial, Cogan's syndrome with polyarteritis nodosa, [Crawford] 1081—ab
KERNICTERUS
amino aciduria in erythroblastosis fetalis, possible relation to, [Nestel] 1507—ab
nonerythroblastic, in premature infant, [Hottinger] 1882—ab
KIDNEYS
artificial, in acute acetylsalicylic acid intoxication, [Dalgard] 1754—ab
artificial, in acute renal failure, [Thaysen] 737—ab; (in children) [Carter] 1508—ab
artificial, in heart arrest from potassium intoxication, [Tu & Crockett] *1955
biopsies, India, 179
biopsy, clinicopathologic correlation in hypertension, [Saltz] 1745—ab
calculi, milk consumption by adults relation to, 113
calculi, nephrolithiasis: glycinuria, hereditary disorder with, [de Vries] 2234—ab
complications of diabetes, Peru 1623
congenital cystic hydrocalicosis, [Flink] 1081—ab
disease, deltacortisone for, [Milliez] 2125—ab
disease (hepatorenal syndrome), pathogenesis, [Lassen] 2224—ab
disease (hereditary), with nerve deafness and ocular lesions, [Goldbloom] 1751—ab
disease (nephrosis), homeostatic principles in management, [Talbot] 303—ab
disease (nephrosis), immunizations and surgery in patient with, 424
disease (nephrosis), in newborn infants, [Gruskay] 1508—ab
disease (nephrotic syndrome), ACTH for: results and effects on proteinuria, laboratory findings, [Mateer: Danowski] 194—ab
disease (nephrotic syndrome), diuretic effect of heparin in, [Majoor] 1494—ab
disease (nephrotic syndrome) in early infancy, [Giles] 633—ab
disease (nephrotic syndrome), prednisone and other steroids for, [Goodman & Baxter] *1798
disease (nephrotic syndrome), pyrexial therapy in, India, 2214
disease (nephrotic syndrome), steroid therapy, [Dundon] 300—ab
disease, new derivatives of cortisone for, [Bergamini] 1321—ab
disease (orthostatic nephrosis), death from, [Cooper] 1211—ab
disease (unilateral) and hypertension, radioactive Diodrast renogram as screening test, [Winter] 1884—ab
dwarf, unilateral, in juvenile persons, pathogenesis and sequelae, [Zollinger] 1639—ab
function changes in hypothermia, sympathetic depressors effect on, [Moyer] 2135—ab
function, cortisone and hydrocortisone effects on, [Raisz] 398—ab
function in endangiitis obliterans, [Holle] 1745—ab
function in prostatism, [Olbrich] 1205—ab
function, significance of urinary citric acid in diagnosis, [Otto] 1743—ab
Inflammation: See Nephritis
injuries during treatment with phenylbutazone, [Scheitlin] 1209—ab
insufficiency, acute failure, (after aortography) [Roy]; (after renal angiography) [Dennandy] 1349—ab
insufficiency (acute failure) after intravascular hemolysis, [Bull] 1499—ab
insufficiency (acute failure), conservative and hemodialysis treatment, [Thaysen] 737—ab
insufficiency, failure after intraperitoneal neomycin, [MacLean] 1637—ab
ischemia and local cooling in sheep, N. Z., 2215
lesions of scleroderma, [Carpent] 741—ab
lysine clearance in cystinuria, pathogenesis and management, [Doolan] 2222—ab
multicystic, and aortic stenosis, excision of kidney reduce cardiac demand: 202
multicystic, congenital unilateral, associated with maternal rubella, [Lipton] 298—ab
niacin effect on, 1770
rupture, spontaneous, [Shaw] 2126—ab
solitary, physiology of, [Maluf] 1884—ab
surgery, late results of nephrectomy for tuberculosis, [Obé] 1206—ab
surgery, nephrectomy successful for hypertension from aortic renal embolus, [Stone] 189—ab
transplantation in sheep, N. Z., 2215
KIDNEYS—Continued
tubular resorption anomaly with aminoaciduria and osteomalacia, Fanconi's syndrome, [Astrup] 285—ab
tumors, polycythemia with, [Conley] 2006—ab
tumors (Wilms'), management, [Abeshouse] 893—ab
tumors, (Wilms'), 3 cases, [Teixeira] 759—ab
wandering, [Eggink] 1639—ab
KLEBSIELLA
meningitis, [Spivack] 740—ab
pneumonia meningitis, cortisone and antibacterials successful in adult, [Sterkel] 740—ab
KLEINBERG, SAMUEL (1885-1957)
Hospital for Joint Diseases has special memorial meeting for, N. Y., 1159
KLINEFELTER SYNDROME
frequency and testicular morphology in relation to nuclear sex, [Ferguson-Smith] 2237—ab
sex chromatin pattern in seminiferous tubule dysgenesis relation to, [Grumbach] 900—ab
KNEE
knock knees in children, United Kingdom, 1992
pain due to arthrosis or chondromalacia, ultrasonic treatment for, Sweden, 1302
painful, with drop foot and hemoptysis, (Diagnostic Problems) [Kushner & Szanto] *2193
KWASHIORKOR
blood studies in, India, 1471
in infants, duodenal enzymes in, [Russo] 890—ab

L

LDH (lactic dehydrogenase): See Dehydrogenase
LABOR
breech delivery, statistics on, Brazil, 866
breech presentations, fetopelvic grading, [Kaltreider] *132
curettage routinely in, [Lounsbury] 1334—ab
forceps delivery, Brazil, 1731
in postmature pregnancy, [Nesbitt] *1656
in tuberculous patient, regional anesthesia preferred for, [Schuster & others] *2163
induced rupture of amniotic membrane and latent period before onset, what is safe time? 2141
painless, Brazil, 1070; 1853
painless, psychoprophylactic method, [Ch'en] 106—ab
rationale of routine use of vitamin K in, 911; (replies) [Quick; and original consultant] 2246
vaginal childbirth, hazard after cesarean section, 766
LABOR (industrial): See Industrial Accidents; Industrial Diseases; etc.
LABORATORIES
clinical, report of Joint Commission on Accreditation of Hospitals on, 160
diagnosis in coronary disease, [Master] *1771
medical, incidence of tuberculosis in, [Reid] 1347—ab
method of identifying Torulopsis glabrata, [Wickerham] *47
LACRIMATION
absence of, in infant, treatment, 1353
LACTATION
heredity and, United Kingdom, 1303
inhibition, estradiol valerate for, [Rosenblum] 1333—ab
LACTIC DEHYDROGENASE: See Dehydrogenase
LAENNEC'S Cirrhosis: See Liver cirrhosis
LAMBLIASIS: See Giardiasis
LAPAROTOMY: See Abdomen surgery
LARGACTIL: See Chlorpromazine
LARVA MIGRANS
treatment, ethyl chloride, 1769
LARYNX
column—tongue—hyoid, deficiencies of motion after poliomyelitis, [Bosma] *216
grafting mucous membrane to, turbinate vs. buccal mucosa, (reply) [Epsteen] 316
spasm during throat examination, 1515
tuberculosis, antimicrobial therapy, [Wallner] 895—ab
LAUNDERING
diapers, phenylmercuric acetate, antiseptic for, 254—E; (correction) 1163
hospital blankets, United Kingdom, 1176
LAWS AND LEGISLATION
A. M. A. Committee on Legislation annual report, 986
Doctor Draft Law: See Medical Preparedness
federal, A. M. A. to study hospitalization of aged financed by Social Security, 841; 1283; (President's Page) 1701
federal, dependents' medical care program, interim progress report, [Miscellany] *1475
federal, proposed bill on free hospital care for beneficiaries under Social Security, 1568—E
federal, to amend civil defense act of 1950, annual report on, 1011
federal, Washington Office summary, 162; 1281; 1702
fluoridation ruled illegal by Supreme Court, Canada, 623
hospitals bill, N. Z., 1073

LAWS AND LEGISLATION—Continued
insanity law amended regarding confinement, N. Z., 181
law on homosexuality and prostitution, committee to consider, United Kingdom, 1175
law to elevate rank of surgeons general, annual report on, 1010
medical examiner system to replace coroner system, advances made, 2088—E
Social Security: See Social Security
State Legislative Key Man Organization, 987
LEAD
less in tobacco, United Kingdom, 2218
poisoning, calcium versenate in, [Meyers] 1752—ab
poisoning hazard from paint on children's toys, [Miscellany] 1996
poisoning, monocalcium disodium ethylenediamine tetracetate in saturnism, [Salvini] 905—ab
LECTURES
Albany Medical College Honorary Lectureship Award created, 1603
Albee (Fred H.) Memorial, role of psychiatrist in rehabilitation, [Braceland] *211
Banting Memorial, in Germany, 1979
Beaumont, 74
Becton, Dickinson, 1158
Bedell (Arthur J.), 1844
Beling (C. C.) Memorial, 1463
Borden award lecture presentation, 75
Brown (George E.) Memorial, 853
Carey (Eben J.) Memorial, 1284
Clendening Lectureship, 371
Comfort (Maudred W.) Lectureship in gastroenterology, 1462
Conner (Lewis A.) Memorial, 853
Cutter, 849
Delta Omega, 1162
Fox (Howard), first, 1976
Friedenwald (Julius) Memorial, 1162
Gifford (Sanford R.) Memorial, 1715
Harrington Lecture of U. of Buffalo, 2207
Huggins (R. R.) Memorial, 1603
International College of Surgeons, on history of surgery, 1157; 1715
Loeb (Hanau W.), 1843
Maudsley, London, England, 611
Mayo Foundation, 2093
Murray (Clay Rae) Memorial, 708
New York Academy of Medicine "Lectures to the Laity," 1844
North Shore Hospital series on emotional problems of childhood, Ill., 1063; 1714; 2205
Northwestern U., cancer lecture, first annual, 1602
Pemberton (Ralph) Memorial, 1285
Peters, (John Punnett) Memorial, first, 1714
Phi Delta Epsilon Fraternity, 1063; 1159
Phi Rho Sigma, 1604
Ranson (Stephen Walter) Memorial, 1715
Rauschkolb (John E.) Memorial, 1287
Reiss (Herman L.) Memorial, 849
Schoenberg (Mark J.) Memorial, 1603
Shaw, (E. E.) Memorial, 170
Spahr (Boyd Leon), 1845
Strauss (Alfred A.), 1160
Vogt (William H.) Lectureship, 1463
Wechsler (Israel S.) Lectureship, 1603
Weidman (Fred D.) Memorial, 1287
Weller (Carl V.), 1975
Westlake (Samuel B.), 1843
Wilinsky (Charles F.), 1462
Wyckoff (John), 1159
LEGAL MEDICINE: See Medical Jurisprudence
LEGISLATION: See Laws and Legislation
LEGS: See also Extremities
lymphedema, unilateral, etiology, treatment, 912
thrombosis in after prolonged television viewing, [Naidu] *881; (reply: aviation travel also) [Caldow] 2220—C
LEISURE CORNER: See Physicians, avocations
LENS, CRYSTALLINE: See Retrolental Fibroplasia
LENTICULAR NUCLEUS
hepatolenticular degeneration, splenic forms, [Boudin] 305—ab
LEPROSY
blood lipid partition in, India, 1472
skin lesions in, India, 1987
tuberculosis relationship, [Brown] 2027—ab
tuberculosis relationship, immunological, Brazil, 1070
LEPTOSPIROSIS
hereditary, India, 1734
LEPTOMENINGITIS
due to Sporotrichum schenckii, [Shoemaker] 1755—ab
LEPTOSPIROSIS
icterohaemorrhagica and canicola, treatment, 117
LEUKEMIA
[Scott] 186—ab; 737—ab
acute, after I^{131} for hyperthyroidism, [Werner & Quimby] *1558
acute, prednisone for, Brazil, 386
acute, variation of survival in, [McMahon] 2005—ab
LEUKEMIA—Continued
after radiotherapy, Norway, 870
blood iron, copper, and transferrin levels in, Austria, 85
lymphatic, with myeloma-type serum proteins, [Azar] 2021—ab
mast cell, presenting as urticaria pigmentosa, [Waters] 407—ab
Memorial Center for Cancer and Allied Diseases, New York, fellowship, 1465
research grant, Wis., 708
rising rate, Norway, 1301
Sweden, 1302
testicular enlargement with, etiological relationship, diagnostic procedures, 910
treatment, ethylenemine quinone in, [Di Pietro] 1343—ab
treatment, India, 2105
urinary ferric chloride test positive in, 200
LEUKOCYTES
anomalous inclusions in Chédiak-Higashi syndrome, [Donohue] 2014—ab
count in differential diagnosis of abdominal trauma, [Berman & others] *1537
donor, febrile transfusion reactions from sensitivity to, [Brittingham & Chaplin] *819
LEUKONYCHIA
totalis: case of white fingernails, 913
LEUKOTOMY: See Brain surgery
LEVARTERENOL
leakage, local ischemia due to, piperoxan for, [Palmer] *1141
LEVOPHED: See Levarterenol
LIABILITY: See Malpractice
LIBEL AND SLANDER: See also Medicolegal
Abstracts at end of letter M
complaint against physician basis for action, [Medicine and the Law] *259
LIBRARY
A. M. A., annual report, 982
medical, dedicated at U. of Kansas, 1064
National Library of Medicine, first annual report issued, 1153—E
of music records, [Leisure Corner] *97
LICENSURE
annual congress (54th), program, 1962
LICHEN
sclerosus et atrophicus of mouth, [Ravits] 892—ab
sclerosus et atrophicus with oral involvement; histopathology, dermabrasive treatment, [Miller] 891—ab
LIFE
expectancy of workers increases, 1718
LIGHT
hypersensitivity to, diagnosis and treatment, 1895
LIME JUICE increase sun tanning: 909
LINDSTROM, W. CARL, honored as artist, exhibit tours, 56
LIOTHYRONINE, SODIUM
deficiency in sporadic cretinism, [Hutchison] 2047—ab
in metabolic insufficiency syndrome and associated disorders, [Morton] *124
LIP and cup, twixt: drug promotion, [Dowling] *657; 688—E
LIPIDS: See Blood lipids
LIPIODOL: See Iodized Oil
LIPOMA
progressive lipomatosis, treatment, 202
LIPS
melanoplakia, generalized intestinal polyposis with, [Richterich] 732—ab
pigmented spots of, in hereditary Peutz-Jeghers syndrome, [Rohrs] *2208
LISTERIA
meningitis, [Dedrick] 99—ab; (in infants) [Edmunds] 1507—ab
LISTERIOSIS
10 cases, [Hood] 2023—ab
LISTON, JAMES M., appointed chief editor of Today's Health, 841
LIVER
amebic lesions of, Brazil, 178
biopsy in tropical splenomegaly, India, 868
biopsy, percutaneous, to isolate Brucella abortus, [Cohen] 1871—ab
biopsy to study histologic changes in viral hepatitis, [Paul] 2119—ab
cancer (metastatic), hemorrhage fatal from, simulating reaction to contrast medium, [Counts & others] *1134
cancer (primary), 107 cases, [Chung] 185—ab
carcinoid metastases from intestines, [Picard] 396—ab
cirrhosis, advanced: hemorrhage from esophageal varices in, [Weber & others] *1899
cirrhosis, alcoholic, delta-cortisone treatment, [Cachin]: (with ascites) [Fraisse] 1086—ab
cirrhosis, Laennec's, cause of death in, [Wallach] 1348—ab
cirrhosis (Laennec's portal), copper metabolism in, [Gubler] 1636—ab
cirrhosis, mortality, 265
cirrhosis (portal), natural history of esophageal varices secondary to, [Palmer] 1497—ab
cirrhosis, posthepatitic, [Ratnoff] *1096
LIVER—Continued
cirrhosis, sodium diuresis from amphenone in, [Wolfe] 1644—ab
cirrhosis, value of coagulation factors in ascitic fluid to distinguish ascites from, [Combrisson] 1213—ab
coma, management, protein withdrawal and specific measures in, [Summerskill] 878—ab
control pressure and force over, by hepatojugulometer in hepatojugular reflux test, [Burch] *1274
disease, adrenal cortex role in, India, 1071
disease, hepatorenal syndrome, pathogenesis, [Lassen] 2224—ab
disease, intragastric whole blood effect on blood ammonia in, [Young] 1757—ab
electric exploration, France, 1986
excretory processes, diagnostic value of selective interference with, [Culver] 2118—ab
fatty infiltration after portocaval anastomosis, Brazil, 178
hepatic-type "flapping tremor" without hepatic disease, [Smythe & Baroody] *31
Hepatolenticular Degeneration: See Lenticular Nucleus
infiltrated by stomach cancer, gastrectomy extended to typical partial resection of, [Mancuso] 1191—ab
Inflammation: See also Hepatitis, Infectious
inflammation (amebic) after old myocardial infarction, emetine contraindicated? 1225
inflammation, homologous serum jaundice virus same as that of natural hepatitis, [Wiener & Wexler] 1075—C
inflammation, pathological anatomy, [Baggenstoss] *1099
necrosis, unexplained, increasing prevalence, [Brunson] 877—ab
raw, diseases from ingestion of: 1518
schistosomiasis, hepatosplenic, Brazil, 1853
suppuration and calcification due to Brucella suis infection, [Spink] 1742—ab
surgery, right lobectomy, long term survival after, [Brunschwig] 1502—ab
tumor, implantation metastasis after needle biopsy of, [Zelman] *682
uptake of $Co^{60}B_{12}$ in differentiation of macrocytic anemias and diagnosis of pernicious anemia and sprue in remission, [Glass] 1870—ab
LOBECTOMY: See under Tuberculosis of Lung
LOBOTOMY: See Brain Surgery
LONGEVITY: See Life expectancy; Old Age
LOWER, RICHARD (1631–1691)
book: "Tractatus de Corde," given to Yale U., 1714
LUCITE: See Methylmethacrylate
LUMBAGO
sciatica, surgical treatment, Norway, 870
LUMBOSACRAL REGION
strapping, effective method, [Bate] *153
LUNGS
abscess therapy, changing picture of, [Wolcott] 1193—ab
arc welders', United Kingdom, 1859
arterial bed in pulmonary hypertension, [Short] 1347—ab
artificial, use of, Brazil, 1730
calcification in solitary nodules, [O'Keefe] 902—ab
cancer, Brazil, 2214
cancer, cerebellar metastases, [Fernández] 105—ab
cancer diagnosis, Denmark, 624
cancer, etiology, cell type in relation to, [Doll] 1211—ab
cancer, factors affecting survival, [Collier] 2227—ab
cancer, false-negative reports in cytologic diagnosis, [Umiker] 2022—ab
cancer in Gwanda, [Osburn] 1752—ab
cancer research, tobacco smoking and, United Kingdom, 87; 89; (in women) 90
cancer, spread in body, [Onuigbo] 1756—ab
collapse, postoperative, bronchoscopy in prevention, [Brown] *947
developmental defect, aberrant artery with intralobar sequestration, [Anderson] 102—ab
disease, angiocardiography in diagnosis, [Lyons] *1939
disease, fungus, VA study, 78
disease, serum transaminase in, [Walsh] 99—ab
disease, simple methods to determine vital capacity and maximal breathing capacity in, [Worton & Bedell] *1652
eosinophilic granuloma, primary, [Arnett] 2025—ab
function in chronic bronchitis and bronchiectasis after intravenous tetracycline, [Fox] 1208—ab
function, India, 1986
hemorrhage, massive, from bronchiectasis, Canada, 1732
histology of generalized emphysema, [McLean] 1346—ab
histoplasmosis, chronic, chemotherapy, [Sutliff] 286—ab

V 16
1957

LUNGS—Continued
histoplasmosis, chronic progressive cavitary, diagnosis, [Lehan] 287—ab
histoplasmosis, chronic progressive, surgical treatment, [Polk] 2009—ab
Hyaline membrane: See Hyaline Membrane
infarction, massive: Infected patent ductus arteriosus with, [Cope] 1746—ab
insufficiency, changing forms and causes, [Rappaport & Mayer] *1331
intracavitary aspiration, summary of results, [Glaquinto] 1318—ab
lesions biopsied under thoracoscope, [Heine] 742—ab
lesions in cystic fibrosis of pancreas, resection for, [Kulczycki] 1338—ab
localized consolidation secondary to primary tuberculosis in young adult, [Jarmiou] 1743—ab
microlithiasis alveolaris pulmonum, [Foote] 1319—ab; (familial occurrence) [Sosman] 901—ab
pneumonopathy, staphylococcic, in early infancy, [Benevolo] 109—ab
right, anomalous pulmonary venous drainage into inferior vena cava with malrotation of heart, [Steinberg] 2135—ab
scar cancers, [Rochorn] 1635—ab
smoker's, Canada, 623
specialist, from phthisiologist to Sweden, 1302
surgery, pneumonectomy, cardiac arrest one hour after, [Hamell] 1503—ab
tuberculomas and hamartomas compared, [Bleyer] 901—ab
tumors, adenomatosis, [Purrell] 741—ab
tumors, sarcoma (metastatic), from knee, (Diagnostic Problems) [Kushner & Szanto] *2193
LUPUS ERYTHEMATOSUS
L. E. factor, placental transmission, [Berlyne] 1336—ab
L. E. phenomenon in rheumatoid arthritis, [Friedman] 285—ab; [Parr] 1318—ab
rash after exposure to sunlight, does window glass filter out ultraviolet rays? 1355
significance of L. E. cell test, [Cowling] 1318—ab
systemic, allergic etiology: polyarthritis, fever, and lymphadenopathy, (Diagnostic Problems) [Kushner & Szanto] *1690
systemic, causes fever in valvular heart disease, [Ross & others] *1
systemic, incidence increased, [Svanborg & Sölvell] *1126
systemic, treatment, 315
LUPUS VULGARIS: See Tuberculosis luposa
LYE: See Sodium hydroxide
LYMPH NODES
axillary metastases after radical mastectomy, treatment, 118
hilar, in sarcoidosis with special reference to prognosis, [Smellie] 1317—ab
Internal mammary biopsy in treatment of breast cancer, [Sandy] 1327—ab
prognostic significance of involvement in cold knife conization biopsies in cervical cancer, [Baker] 405—ab
scalene biopsy as diagnostic aid in chest diseases, [Schiff] 1501—ab
LYMPHADENITIS
mesenteric, acute, [Borri] 1330—ab
oculoglandular form of cat-scratch disease, [Levitt] *1955
LYMPHADENOPATHY
polyarthritis, and fever with, in young man, (Diagnostic Problems) [Kushner & Szanto] *1690
LYMPHATIC SYSTEM
pathological anatomy of hepatitis, [Baggenstoss] *1099
LYMPHEDEMA
etiology after radical mastectomy, evaluation of factors in, [Treves] 1326—ab
primary, clinical and lymphangiographic studies of lower extremities, [Kinmonth] 2232—ab
unilateral, of leg, etiology, treatment, 912
LYMPHOBLASTOMA
follicular, of spleen, 27 year survival, [Decker & Little] 1178—C
LYMPHOGRANULOMA
malignant, skeletal localization, [Pisani] 1759—ab
LYMPHOMA
malignant, with mycloma-type serum proteins, [Azar] 2021—ab
optic atrophy after mechlorethamine hydrochloride and ACTH for, etiologic relationship, 2033
LYSINE
renal clearance in cystinuria, pathogenesis and management, [Doolan] 2222—ab

M

MEK: See Methyl Ethyl Ketone Peroxide
MEND: See under Education, Medical
MACROGLOSSIA, congenital, treatment, 2243
MACULA LUTEA
degeneration (granular) in solar retinitis, slowly progressive case, 1647
MADURA FOOT
treatment, (replies) [Liber; and original consultant] 1520
MAGAZINES: See Journals
MAGNACORT: See Hydrocortamate Hydrochloride
MAGNESIUM
oxide smoke, irritant effects of acid smog abolished by, [Sim & Pattle] *1908
MAGNETIC
removal of foreign bodies? (replies) [Blackford; and original consultant] 766
MAILING
fixed and dried cytological smears, [Sills & Garret] 2219—C
MAIMONIDES (Rambam)
book: "Regimen Sanitas" republished, Israel, 722
MALACOPLAKIA
case report, [Melicow] 1084—ab
MALARIA
morbidity in Golaz, Brazil, 1470
treatment, 377 C 54, [Bruce-Chwatt] 1345—ab
MALNUTRITION: See Nutrition
MALONYLUREA: See Barbiturates
MALPRACTICE: See also Medical Jurisprudence; Medicolegal Abstracts at end of letter M
A. M. A. Law Department annual report, 984; 986
A. M. A. Law Department series: See Medicine and the Law
A. M. A. prepares liability kits, 356
A. M. A. study of professional liability, [Medicine and the Law] *701
is neglect of antitetanic serum defensible? Swedish disciplinary case, 627
medical-legal problems and their solutions, [Medicine and the Law] *699
MALTA
economic problems, WMA program, (Medicine at Work) [Kodin] *48
MANIC Depressive Psychosis: See Psychosis
MARFAN'S SYNDROME: See Arachnodactyly
MARRIAGE
Japanese brides to live in U. S., 1072
MARTYRS
homage to Daniel Alcides Carrión, who proved verruga peruana and Oroya fever have same etiology, Peru, 1622
MASTEK Two-Step Test: See Heart function
MASTITIS: See Breast inflammation
MASTURBATION
problems, chlorpromazine and diethylstilbestrol in severe mental deficiency with, [Geyer] 2232—ab
MATERNITY
care, A. M. A. Committee annual report on, 1041
mortality, United Kingdom, 627
MATHEWS, ALBERT PRESCOTT (1871-1957)
death of, 853
MAXILLA: See Jaws
MEASLES
encephalitis after, [Bergsjö] 886—ab; (adrenal steroids for) [Allen] 1200—ab
neurological complications, [Tyler] 104—ab
MEAT
salting to remove blood, residual salt in relation to salt free diet, (replies) [Trimble; and original consultant] 120
MECAMYLAMINE
mode of action, [Bennett] 1888—ab
treatment of hypertension, [Cottier] 1743—ab; [Giordano] 2236—ab
MECHLORETHAMINE HYDROCHLORIDE
treatment plus ACTH in lymphoma, optic atrophy after, etiologic relationship, 2033
MEDIAN, 5-year, explanation of term, 765
Medical . . . For most entries see under noun component, Economics, Medical
MEDICAL ASSISTANTS
A. M. A. organizational manual, 256
MEDICAL CARE: See Medical Service
MEDICAL CENTER: See also Health center
mobile units, Peru, 86
MEDICAL DAYS
annual scientific day of U. of Pittsburgh, alumni, 850
MEDICAL EDUCATION FOR NATIONAL DEFENSE (MEND): See Education, Medical
MEDICAL EXAMINERS
to replace coroners, advances made, 2088—E
MEDICAL JURISPRUDENCE: See also Malpractice; Medicine and the Law; Medicolegal Abstracts at end of letter M
A. M. A. booklet on medicolegal forms with legal analysis, 1832
A. M. A. Law Department, annual report, 983
autopsy, format of medicolegal forms, [Medicine and the Law] *697
blood alcohol findings at autopsy, (reply) [Muehlberger] 726—C
Medical Protection Society, annual meeting, United Kingdom, 1736
MEDICAL JURISPRUDENCE—Continued
MEDICOLEGAL ABSTRACTS, annual report, 985
medicolegal consent forms, 984
mock trial, chemical tests for intoxication, 983; 986
paternity tests in criminal proceedings for nonsupport, [Medicine and the Law] 2204
Public Relations annual report on medicolegal symposiums, 992
report on narcotic addiction (Council article) *1834
treat confused, uncooperative patient without his consent? 1226
MEDICAL MISSIONARIES
positions of Methodist Church open, 2208
MEDICAL PRACTICE ACTS: See Licensure; Medicolegal Abstracts at end of letter M
MEDICAL PREPAREDNESS
Armed Forces program for residency deferment, (Council report) 607
change in physician-troop ratio, 1010
"Doctor-Draft" Act, Committee annual report, 987
"Doctor-Draft" Law expires, new legislation, 1009; 1442
doctor draft, United Kingdom, 2217
national defense and medical education, Selective Service System, 1440
MEDICAL PROTECTION SOCIETY
annual meeting, United Kingdom, 1736
MEDICAL RECORDS
librarians, schools for, 1453
medicolegal consent forms, 984
Necessity for and Format of Medicolegal Forms: See Medicine and the Law
technicians, schools for, 1454
MEDICAL RESEARCH COUNCIL (England)
report on cortisone vs. prednisone for rheumatoid arthritis, 182; 1888—ab
report on prolonged antibiotic treatment of severe bronchiectasis, 1889—ab
MEDICAL RETIREMENT SAVINGS PLAN
Canada, 1731
MEDICAL SERVICE
A. M. A. Council annual report, 1033
federal, A. M. A. Committee annual report on, 1037
for Armed Forces Dependents: See Medicare
for Indigents: See Medically Indigent
inflation and, 600—E
plans, major medical expense insurance, its development and problems, (Council article) [Follmann] *1578
plans, medicine's role in financing, (Council report) [Allman] *1571
plans, role of medical director in major medical expense insurance, (Council article) [McNamara] *1586
private advantages of, (Miscellany) [Gustavson] *96
program of U. M. W. A. Welfare and Retirement Fund, [Draper] 1484—C
MEDICAL SOCIETY: See Societies, Medical; list of Societies at end of letter S
MEDICALLY INDIGENT
A. M. A. Committee annual report on, 1043
children with acute respiratory infections, penicillin combinations for, [Githens] 1085—ab
financial aid to tuberculous miners, India, 1733
MEDICARE
conference, second, 2092
dependents' medical care program, [Robinson] *661; (progress report) [Miscellany] *1475
MEDICINE
advances, first Oklahoma colloquy on, 1977
allied training, A. M. A. Special Committee report, 1011
aspects of Suez campaign, United Kingdom, 388
atomic, Dr. Chamberlain heads V. A. program, 857
Aviation: See Aviation
careers, health and second 5-year plan, India, 1620
current problems, A. M. A. Philadelphia meeting stresses, 690—E
history, American Society of Pharmacology and Experimental Therapeutics commemorated centennial of Dr. Abel, 255—E
history, hematology: record of a century, [Dameshek] *28
history, International College of Surgeons established a Hall of Fame on, [Thorek] 1187—ab
history, "Regimen Sanitas" by Maimonides republished, Israel, 722
history series on U. S. Army Medical Department in World War II, history of, [Coates] *241
in Russia, United Kingdom, 873
Legal: See Medical Jurisprudence
medical life in Taiwan, (photos) [Pankratz] 1486—C
military, specialty and career, [Lee] *805
Organized: See also American Medical Association; Societies, Medical; and under names of specific societies

MEDICINE Continued
organized, related activities, [Medicine and the Law] *702
Practice: See also General Practice; Specialties; and under name of specialties as Pediatrics
practice, A. M. A. Committee report on, 1051
practice, corporate, Judicial Council session on Georgia faculty members accused of, 839
practice, group, annual report on, 1044
practice, group, first by Negroes with complete diagnostic facilities in Chicago, 73
progress, serendipity in, (Medicine at Work) [Golin] *2084; 2088—E
role in financing health care costs, (Council report) [Allman] *1571
television response in Wausau, Wis., 840
world, comes of age, World Medical Association activities, (Medicine at Work) [Golin] *49

MEDICINE AND THE LAW
A. M. A. series on professional liability, (liability involving physicians in federal service) *363; (claims and suits) *608
complaint against physician basis for libel action by physician, [Medicine and the Law] *2259
medical-legal problems and their solution, 699
necessity for and proper format of medicolegal forms, (consent to operations and other procedures) 65; (patient's right to privacy) 167; (confidential communications) 259; (artificial insemination) 367; (physician-patient relationship) 612; (autopsy) 697
paternity tests in criminal proceedings for nonsupport, 2201

MEDICINE AT WORK
bootstraps for millions: advances in rehabilitation, [Golin] *1145
serendipity: big word in medical progress, [Golin] *2084
world medicine comes of age, World Medical Association activities, [Golin] *49

MEDICOLEGAL: See Medical Jurisprudence: Medicine and the Law; Medicolegal Abstracts at end of letter M

MEDROL: See Methylprednisolone

MEDULLOEPITHELIOMA: See Neuroepithelioma

MEGACOLON: See Colon

MEGAPHEN: See Chlorpromazine

MELANIN
melanoplakia of lips, oral mucosa and fingers in generalized intestinal polyposis, [Richterich] 732—ab
pigmented nevus, management, [Shaffer] 1084—ab
spots on lips and intestinal polyposis: hereditary Peutz–Jeghers syndrome, [Rohrs] *208

MELANOBLASTOMA
rabies vaccine for, 2033

MELANOMA (melanosarcoma)
anorectal, malignant, [Cristiani] 883—ab
radiation therapy before surgery in, Austria, 85

MELENA
universal symptom in upper gastrointestinal hemorrhage, [Weber & others] *1899

MEMBRANES
pupillary, familial persistent, [Cassady] 2019—ab

MENINGES
chronic subdural hematoma, [Cuccia] 1503—ab
subdural effusions complicating purulent meningitis, [Méndez Cashion] 1194—ab
subdural hematoma after air encephalography, [Robinson] 292—ab

MENINGITIS
aseptic, with rubelliform rash, (Canada) 623; [Laforest] 888—ab
epidemic, abacterial, in rural areas and isolated settlements, [Brockhaus] 1330—ab
Klebsiella, [Spivack] 740—ab
Klebsiella pneumonia, cortisone and antibacterials successful in adult, [Sterkel] 740—ab
listeria, [Dedrick] 99—ab; (in infants) [Edmunds] 1507—ab
"meningitic" breathing (Biot's), vs. jerky and irregular breathing, 1568—K
meningococcal and pneumococcal, in childhood, penicillin for, [Friederiszick] 1342—ab
meningococcic: nervous, allergic reaction to antitetanic serum in, [Forsini] 2233—ab; nonbacterial, epidemic in Aachen, [Scheidhauer] 1879—ab
purulent, acute, tetracycline for, [Koch] 1083—ab
purulent, subdural effusions complicating; [Méndez Cashion] 1194—ab
tuberculous, [McKendrick] 2012—ab
viral, aseptic, epidemic with eruption, [Valcke] 884—ab
viral, 7 cases in one family, Canada, 1172

MENINGOCOCCEMIA
acute, adrenal lesions in, [Thomison] 196—ab

MENINGOCOCCEMIA—Continued
acute, antibacterial therapy in collapse due to, [Cassidy] 637—ab

MENOPAUSE
after removal of breast cancer, endocrine therapy for? 118
false diagnosis of hyperthyroidism, [Jackson] *1533
vaginal bleeding one year after, 2034

MENSTRUATION
irregularities, 1223; (ultrasounds cause?) 1225
one year after menopause, 2034
premenstrual acne, treatment, (replies) [Wiener; and consultant] 316; [Sutton] 2245
premenstrual recurrent, nonspecific parotitis; treatment, 203
premenstrual syndrome, pregnancy toxemia amongst sufferers of, United Kingdom, 1073
riboflavin metabolism during, India, 1173

MENTAL DEFECTIVES: See also Phenylketonuria
Buffalo diagnostic and counselling center for children announced, N. Y., 615
children, fresh tissue and sicca cell for, [Destunis] 2133—ab
congenital syphilis as cause of, [Courville] 754—ab
malignant masturbatory problems in, chlorpromazine and diethystilbestrol for, [Geyer] 2232—ab
Rh factor and, Brazil, 1853
treatment, chlorpromazine, [Tarjan] 2124—ab
treatment, pentylenetetrazol, [Berman] 2233—ab
USPHS grants for research in, 1611

MENTAL DISORDERS: See also "Insanity" under Medicolegal Abstracts at end of letter M
confinement for insanity, amendment of law on, N. Z., 181
etiology: procaine penicillin, Sweden, 1624
Hospitalization for: See Hospitals, mental
in Scotland, 181
Joint Commission on: See also Joint Commission
Joint Commission requests names of voluntary organizations of ex-mental patients, 1606
management of somatic complications in, [Meislin] *1107
neuropharmacological agents in rehabilitation of, [Ferguson] *1677
postpartum, obstetrician's role in, [White & others] *138
treatment, ataraxics, [Pennington] 293—ab
treatment, chlorpromazine, Brazil, 1730
treatment, meprobamate, [Lehmann] 404—ab; (Norway) 2105
treatment, promazine and chlorpromazine, Canada, 1619
treatment, tranquilizers, symposium on, Peru, 1472

MENTAL HEALTH
A. M. A. annual conference, Chicago, Nov. 22-23, 1956: (report) 1961
A. M. A. Council annual report, 993
council created, Peru, 86
international seminars, 375
Joint Commission on: See Joint Commission
mental hygiene director, first in Department of Public Health, Ga., 370
research facilities expanded, N. Y., 1976
state medical associations, third annual conference on, 1
study at U. of Pennsylvania, 1285

MENTALITY: See Intelligence; Mental Defectives

MEPACRINE: See Quinacrine

MEPHENESIN
treatment plus chlorpromazine and promethazine in eclampsia, [Sheraes] 1336—ab

MEPHYTON: See Phytonadione

MEPROBAMATE
clinical experiences, [Lehmann] 404—ab
toxicity: hypersensitivity, Israel, 625
treatment of epilepsy of children, [Livingston] 2124—ab
treatment of mental disorders, Norway, 2105

MERALGIA PARESTHETICA
[Stevens] 293—ab; (correction) 1067

MERCURY
cyanide for primary-secondary syphilis, penicillin after 3 injections of, [Bolgert] 1498—ab
Diuretics: See Diuretics
toxicity: peptic ulcer from seed disinfectant, Ceresan M, 1769

MESENCHYMOMA
feminizing (granulosa-cell and theca-cell), with endometrial carcinoma, [Greene] 632—ab
ovarian, Brazil, 2214

MESENTERY
lymphadenitis, acute, [Borri] 1330—ab

MESTINON: See Pyridostigmine

METABOLISM: See also specific food groups or elements as Potassium

METABOLISM—Continued
defects after pancreaticoduodenectomy for chronic relapsing pancreatitis, [Jordan] 402—ab
disturbances in adults, milk consumption relation to, 113
fellowship at Donner Laboratory, Berkeley, Calif., 1842
inborn errors: phenylketonuria, (Council report) [Wright] *2079
insufficiency, sodium liothyronine for, [Morton] *124
insulin and sulfonamides modify, Austria, 1618
oxalosis: new disease of "storage" type, [DeToni] 1341—ab

METACORTANDRACIN: See Prednisone

METACORTANDRALONE: See Prednisolone

METALS: See also specific metals as Iron
corrode after handling with sweaty hands, counteract condition? 1647
trace, in cancerous and noncancerous tissue, spectrographic study, [Tietz & others] *2187

METHALLENESTRIL
N. N. D., 156

METHITURAL
in cerebral electrotherapy, [Robie] 103—ab

METHIUM: See Hexamethonium

METHODIST CHURCH, medical missionary positions announced, 2208

METHONIUM
Hexamethonium: See Hexamethonium

METHYL ALCOHOL
chronic degeneration of brain in worker exposed to, etiologic relationship? 1354
in shellac and paint solvent: Solox, intoxication from, [Hammack] *24

METHYL ETHYL KETONE PEROXIDE
toxicity in plastic manufacture, 201

METHYL SALICYLATE
intoxication, exchange transfusion for, [Adams & others] *1563

METHYL VIOLET: See Methylrosaniline

METHYLMETHACRYLATE (Lucite)
plombage in treatment of tuberculosis of lung, [Joly] 1192—ab

N1-METHYLNICOTINAMIDE
excretion, cyanocobalamin effect on, India, 1070

METHYLPREDNISOLONE
potent new anti-inflammatory steroid, [Feinberg & others] *1560

(1-METHYL-2-pyrrolidyl) methyl benzilate methyl methosulfate, inhibitor of gastric secretion, U. K., 389

METHYLROSANILINE
treatment of oxyuriasis, limit to number of courses, 1226

METICORTELONE: **METI-DERM**: See Prednisolone

METICORTEN: See Prednisone

METOQUIN: See Quinacrine

METRAZOL: See Pentylenetetrazole

MICROCOCCUS: See Staphylococcus

MICROSCOPE
500,000th made by Ernst Leitz firm, received by P. A. Weiss of Rockefeller Institute, 1159

MIGRAINE
abdominal: diagnosis, pathogenesis and therapy, 2029

MILITARY
medical affairs, A. M. A. annual report on, 988; 1009
medicine, specialty and career, [Lee] *805
Preparedness: See Medical Preparedness
recruits, prevention of heat casualties in, [Minard & others] *1813
Reserve Program, U. of Wisconsin received citation for cooperation with, 1717
sea transport, Asian influenza epidemic aboard, [Schreiber] *1683
survey of discharged medical personnel, annual report on, 1010
Veterinary Corps, action to eliminate, annual report on, 1009

MILK
allergy, diagnostic aspects and role of substitutes, [Fries] *1542
consumption by adults, relation to metabolic disturbances or renal calculi? 113
dried, vitamin D reduced in, U. K., 2217
evaporated, in infant feeding, [Moss] 1202—ab
radioactive contamination, U. K., 1858
restriction for premenstrual acne, (replies) [Wiener; and original consultant] 316; [Sutton] 2245

MILKMEN
orange drinks from; deficient in ascorbic acid, U. K., 1174

MILTOWN: See Meprobamate

MINERAL OIL: See Petrolatum, liquid

MINERS
coal, breathless, [Martin] 636—ab

MISSING PERSONS
seek identity of brutally murdered boy, 4 or 5, Philadelphia, (photo) 617

V 16
1957

MITRAL VALVE
calcification, stratigraphy in investigation for, [Rizzetto] 196—ab
insufficiency, confusion of tricuspid incompetence with, [Schilder] 2227—ab
stenosis, commissurotomies for, [Ceccarelli] 188—ab; (visual loss after) [Alfano] 1642—ab
stenosis, diagnosis and surgical treatment, [Uglov] 751—ab
surgery, atrial fibrillation after valvulotomy, [Heinz] 181—ab
surgery, commissurotomy and arterial embolectomy, [Chalnot] 742—ab
surgery, commissurotomy and mild rheumatic carditis, [Kupriyanov] 398—ab
surgery, commissurotomy, disability 2-5 years after, [Logan] 1746—ab
surgery, commissurotomy; indications and results, [Duvernizzi] 881—ab
surgery, commissurotomy, roentgen follow-up study, [McAfee] 1757—ab
surgery, postcommissurotomy syndrome, [Rosenberg] 1496—ab; [Volta] 1872—ab
surgery, valvotomy, determination of success after, [Mounsey] 1873—ab
MOLE: See Nevus
MONILIASIS
fatal in newborn infant, [Nezelof] 2015—ab
in pediatrics, [Dobias] 2123—ab
vaginal, identification and therapy, [Pickhardt] 757—ab
vaginal, treatment, 199
MONKEYS
antituberculous therapy in, [Fremming] 2133—ab
MONONUCLEOSIS, INFECTIOUS
treatment, prednisone, Peru, 86
MONSTERS
anencephalic, 2 born to woman with 2 normal children, possibility of further occurrence, 311
MORGAGNI-ADAMS-STOKES SYNDROME: See Heart, block
MOSQUITOES
as possible vectors of infectious hepatitis, 423
MOTION PICTURES: See Moving Pictures
MOTOR VEHICLES: See Automobiles: Medicolegal Abstracts at end of letter M
MOTORS
electric, cleaners, thorax pain from? 1768
MOUNTAIN CLIMBING
(reply) [Michener] 91—C
MOUTH
cancer, free mass examinations, Minn., 1602
cancer, vitamin B complex and estrogens for, India, 1471
dryness in man 70, etiology, treatment, 115
lichen sclerosus et atrophicus, [Ravits] 892—ab; (histopathology, dermabrasive treatment) [Miller] 891—ab
mucosa, melanoplakia, generalized intestinal polyposis with, [Richterich] 732—ab
oral cavity and disease, 159—E
temperature after smoking, 424
MOVING PICTURES
A. M. A. annual reports on, 992; 1014
"Annual Prize for Medico-Surgical Cinema," 1718
"Function of Normal Larynx," wins International awards, Chicago, 818
medicolegal film series, 984; 986
MOVING PICTURES—MEDICAL (REVIEWS)
Are You Positive, 2004
Complete Vaginal Repair: Simplified Approach, 1492
Congenital Atresia of the Esophagus, 1864
Death of a Cell, 2004
Dermatologic Office Procedures for the General Practitioner, 1492
Disorders of the Heart Beat, 2111; (illustrated review) *2112
End-to-Side Bypass Homograft Without Resection in Segmental Arterial Occlusion, 2004
Esophageal Atresia with Tracheo Esophageal Fistula, 1492
Even for One, 1182
Grip on the Nation, 1076
Hepato-Jugular Reflux: Helpful Sign in Diagnosis and Treatment of Congestive Heart Failure, 280; (illustrated review) [Bryant] *281
Hypothyroidism: Its Pathognomonic Diagnosis and Its Treatment, 1310 (illustrated review) [Starr] *1311
Immediate Postoperative Care, 280
Learning About Your Nose, 1076
Medical Witness, 1711
Meti-steroids in Rheumatoid Arthritis, 1076
Mr. Finley's Feelings, 1492
Motion Picture in Medical Education, 1492
Principles of fracture reduction, (illustrated review) [Larmon] *1865
Replacement Transfusion for Treatment of Erythroblastosis Foetalis, 1076
Safe Cerebro-electrotherapy, 1491
Techniques of Angiography, 1491
MOVING PICTURES, MEDICAL REVIEW—Continued
Time and Two Women, 728: (illustrated review) [Meigs] *729
To Your Health, 2004
Training the Medical Student, 1182
Work of the Blood, 1864
MUCOUS MEMBRANES
allergic reactions to probenecid-penicillin in hemolytic streptococci infections, [Ström] 1510—ab
dryness of mouth and tongue in man 70, etiology, treatment, 115
grafting to larynx, turbinate vs. buccal mucosa, (reply) [Epsteen] 216
MULTIFUGE: See Piperazine Citrate
MUMPS (epidemic parotitis)
during pregnancy, congenital defects in infants after, [Holowach] 299—ab
laboratory studies, diagnosis by tissue-culture technics, [Utz] 2132—ab
virus and subacute thyroiditis, Israel, 722
MUNCHAUSEN SYNDROME
peregrinating problem patients, [Chapman] *927
self-induced bleeding, [Reisner] 2108—C
MURDER
homicidal school teachers, Japan, 625
seek identity of brutally murdered boy, 4 or 5, Philadelphia, (photo) 617
MURRAY VALLEY RASH
[Wilson] 1870—ab; [Fuller] 1871—ab
MUSCLES
abdominal, wearing girdles harmful to? 641
disease, blood enzymes in, [Pearson] 413—ab
disease, Sister Elizabeth Kenny Foundation, scholarships, 852
enzymes, changes in myocardial infarction, [LaDue] *1776
hyperostosis generalisata of Camurati-Engelmann type, [Roth] 297—ab
Inflammation (Multiple): See Dermatomyositis
intercostal, desmoid tumor, [Gatchell] 2021—ab
Spasm: See Spasm
thyrotoxic myopathy with disturbance in potassium metabolism, [Collings] 2232—ab
twitching of, treatment, 315
weakness after streptococcic infection, 1518
MUSEUMS
Medical Museum of Wisconsin, plans for, 1161
on tour, United Kingdom, 1302
MUSIC: See Physicians, avocations
MUSTARD: See Nitrogen Mustards
MUSTARGEN: See Mechlorethamine
MYALGIA
encephalomyelitis, epidemic, U. K., 1857
MYASTHENIA
neuromyasthenia, epidemic, (in Florida) [Poskanzer] (in student nurses) [Shelokov] 2026—ab
MYASTHENIA GRAVIS
after removal of thymoma, [Rowland] 1879—ab
carotid sinus and, [Yoel] 2010—ab
crisis, d-tubocurarine treatment, [Churchill-Davidson] 898—ab
physiopathology, diagnosis, treatment, [Cambier] 103—ab
treatment, multiple-dose tablets of neostigmine bromide and Mestinon bromide, [Schwab & others] *671
MYCIFRADIN: MYCIGUENT: See Neomycin
MYCOSIS: See also specific mycoses, as Blastomycosis
fungistatic activity of aromatic diamidines, India, 1071
treatment of Madura foot, (replies) [Liber; and original consultant] 1520
MYCOSTATIN: See Nystatin
MYELITIS
acute ascending, after Salk vaccine, [Uehlinger] 1357—ab
MYELOMA
blood iron, copper, and transferrin levels in, Austria, 85
multiple, and rheumatoid arthritis, similarity, [Davis] 1498—ab
type serum proteins in malignant lymphoma and lymphatic leukemia, [Azar] 2021—ab
MYENTERIC PLEXUS
aganglionosis, diagnosis and treatment, [Riker] 1874—ab
MYOBLASTOMA
primary granular-cell, of bronchus, [Hebert] 2010—ab
MYOCARDITIS
brucella, [Panuccio] 1496—ab
eosinophilic, related to trichinosis fatal, [Chase] *1826
influenza, during childhood, [Müller] 1750—ab
poliomyelitis, [Marinesco] 1756—ab
MYOCARDIUM
circulatory obstruction in determination of success after mitral valvotomy, [Mounsey] 1873—ab
MYOCARDIUM—Continued
idiopathic failure in last trimester of pregnancy and puerperium, [Meadows] 406—ab
infarction, acute, anticoagulants in, [Eastman] 303—ab; [Armas Cruz] 897—ab; (Brazil) 1731; (prognostic factors) [Chieffo] 733—ab; (warfarin sodium for) [Fremont & Jagendorf] *1381
infarction, acute, diagnostic aids, [Losner] 1744—ab
infarction, acute, surgery for ruptured interventricular septum after, [Cooley] 101—ab
infarction, alcohol and glyceryl trinitrate hazards in, 114
infarction, cellular changes, [Barrie] 2022—ab
infarction: hemorrhagic pericarditis, pleurisy, and pneumonia complicating, [Dressler] 875—ab
infarction, incidence and mortality on golf course, 1220
infarction, intraventricular septum perforation due to, [Dorney] 1077—ab
infarction, laboratory aids in diagnosis, [LaDue] *1776
infarction, old, emetine contraindicated for amebic hepatitis in? 1225
infarction, oxygen routinely for? 1648
infarction, prevention, bishydroxycoumarin for, Norway, 2105
infarction, prognostic factors, [Honey] 629—ab
infarction, serum enzyme alterations in, [Wróblewski] 2007—ab
infarction, serum lactic dehydrogenase in diagnosis, [MacDonald & others] *35
infarction, serum transaminase in diagnosis, [Walsh] 99—ab: [Hanson] 1315—ab
infarction, shoulder-hand syndrome after, prognosis, [Edelken] 1183—ab
infarction, syndrome of relief of angina pectoris after, [Mattis] 395—ab
infarction, value and significance of C-reactive protein and transaminase in, [Carcassi] 1871—ab
sarcoidosis, [Peacock] 1212—ab
MYOGLOBINURIA
paroxysmal paralytic, familial, [Fitz] 1079—ab
MYOPATHY: See Muscles
MYOPIA
acute transient, after acetazolamide, [Binder & Steele] *154
MYOSITIS
Multiple: See Dermatomyositis
MYXOMA
cordis, diagnosis pre-operatively, [van Buchem] 401—ab
of heart, intracavitary, diagnosis and treatment, [Bahnson] 631—ab
of left atrium, successful removal under hypothermia, [Chin] 1189—ab

Medicolegal Abstracts

AORTOGRAM: See Malpractice
ASSAULT AND BATTERY: See Malpractice: operations
AUTOPSIES
exhumation permit, 93
right to authorize, 93
sisters: right to authorize, 93
widow: right to authorize, 93
BLOOD
paternity: blood grouping tests to determine, 183
transfusion: hepatitis, 1862
transfusion: jaundice, 1862
transfusion: plasma, 1862
BURNS: See Malpractice
CATHETER: See Malpractice: operations
CLINICS
college owned: liability for acts of students, 1180
owned by laymen: physician employed by: revocation of license for, 1189
owned by laymen: right to hire physicians, 1189
DEAD BODIES: See also Autopsies
autopsies: right to authorize; degree of relationship, 93
exhumation for autopsy purposes, 93
DENTISTS
extraction: failure to remove root, 280
standard of care, 280
DRUNKENNESS
chemical tests: admissibility in evidence, 1995
ELECTROSHOCK: See Malpractice
EVIDENCE
blood grouping tests: paternity, 183
drunkenness: chemical tests, 1995
due process of law: see scientific tests, infra
hypothetical question: privileged communication in relation to, 1179
paternity: blood grouping tests, 183
scientific tests: aortogram, 1740
scientific tests: drunkenness: due process of law, 1995

Medicolegal Abstracts Continued
EVIDENCE Continued
scientific tests: drunkenness; search and seizure, 1995
scientific tests: drunkenness; self-incrimination, 1995
scientific tests: due process of law, 1995
scientific tests: paternity, 183
search and seizure: see scientific tests, supra
self-incrimination: see scientific tests, supra
FOOD, DRUG AND COSMETIC ACTS
drugs: adulterated: plasma, 1862
drugs: blood plasma: hepatitis in relation to, 1862
drugs: hepatitis following use of blood plasma, 1862
GRIEVANCE COMMITTEE: See also Libel and Slander
privilege: complaint to grievance committee, 1181
HOMOLOGOUS SERUM HEPATITIS
plasma as cause or, 1862
HOSPITALS, CHARITABLE
exclusion of practitioners: annual appointments, 94
exclusion of practitioners: board's rights, 94
exclusion of practitioners: notice of hearing, 94
immunity, 279
liability in general, 279; 1306; 2110
nurses: negligence of: liability for, 279; 1306
pay patient: liability, 1306
potassium permanganate: given internally, 1306
respondeat superior, in relation to, 279
staff: annual appointments: failure to renew, 94
HOSPITALS, GOVERNMENTAL
county hospital: liability of county for negligence of employee, 93
liability for injury to pay patient, 92
liability in general, 92
HOSPITALS, IN GENERAL
duty owed to patients, 393
nurses: liability for, 393
records: admissibility in general, 817
records: admissibility to show causation, 817
records: diagnosis: admissibility in record, 817
INSANITY
civil: commitment: testimony of physician, 93
commitment certificate: physician's liability therefore, 93
criminal: Durham case, 1490
criminal: irresistible impulse test, 1490
criminal: M'Naghten's rule, 1490
criminal: "right or wrong" test, 1490
criminal: test, 1490
physician's certificate as privileged, 93
INTERNS
as independent contractors: in college owned clinic: liability for, 1180
LIBEL AND SLANDER
grievance committee: complaint of patient, 1181
guarantee of impossible cure, 1181
letter to grievance committee, 1181
MALPRACTICE
after care: removal of gallbladder, 95
anesthetist: as independent contractor, 1307
anesthetist: liability for patient's fall, 1307
aortogram: injury following, 1740
aortogram: negligence in performing, 1740
aortogram: negligence in using, 1740
burns: hot water bottles, 2110
caesarean section: failure to perform, 393
childbirth: Caesarean section, failure to perform, 393
clinic, operated by college: liability for acts of student, 1180
concealment of information from patient, 1740
dentists: degree of care required, 280
dentists: extraction: removal of root, 280
diagnosis: mistake in, 1306
electroshock: wife's consent to treatments of husband, 183
evidence: degree of proof required, 393
evidence: standards of care, 1307
evidence: witness, expert: necessity for, 95; 393; 2110; 1307
evidence: witnesses, expert: standard of care, 95
fall from operating table: liability for, 1307
foreign bodies: lap-pack, 1740
foreign bodies: limitation of actions, 1740
foreign bodies: plastic catheter, 1307
fractures: cast: failure to apply, 1306
fractures: failure to diagnose, 1306
fractures: roentgenograms: failure to take, 1306
gallbladder, postoperative care, 95
insanity: commitment: physician's liability, 93
instructions of court: reputation of physician, 95
limitation of actions: accrual of right of action, 1740
medical college: liability for acts of student in college owned clinic, 1180
operations: after care, calculated risk of burns, 2110
operations: after care requirements, 95
operations: aortogram: negligence in performing, 1740
MALPRACTICE—Continued
operations: assault and battery, 92; 183
operations: broken catheter: failure to locate, 1307
operations: catheter: broken during manipulation, 1307
operations: consent by minor invalid, 92
operations: consent: electroshock, 183
operations: consent: wife's consent to electroshock treatments of husband, 183
operations: electroshock, 183
operations: failure of surgeon to call on assistant, 1307
operations: fall from table: liability for, 1307
orderly, liability for negligence of, 1307
osteopathic manipulation: ruptured disc, 1180
osteopaths: ruptured disc, 1180
reckless disregard of consequences of act, 1740
reputation of physician: court's instructions in relation to, 95
roentgenograms: failure to make, 1306
ruptured disc following osteopathic treatment, 1180
senior student: liability, of college clinic, 1180
skill and care required of student, 1180
skill and care: standards, 2110
surgeon, liability for negligence of orderly, 1307
surgeon, when responsibility starts, 1307
treatment prior to complete diagnosis, 1180
wilful and wanton conduct, 1740
MEDICAL PRACTICE ACTS
clinics: hiring physicians, 1189
corporate practice, 1189
lay clinics: hiring physicians, 1189
licenses: revocation: felony: conviction of tax evasion, 394
licenses: revocation: income tax evasion, 394
licenses: revocation: loaning license to another, 1489
licenses: revocation: unprofessional conduct, 394
naturopathy, as practice of medicine, 1181
MOTOR VEHICLES
drunken driving: chemical tests: admissibility in evidence, 1995
NATUROPATHY
as practice of medicine, 1181
PATERNITY
blood grouping tests in relation to, 183
PHYSICAL EXAMINATIONS
petitioner in Workman's Compensation case, 1062
Workman's Compensation Acts in relation to, 1062
PRIVILEGED COMMUNICATIONS
consulting physician, 1179
disqualification of physician, 1179
examining physician, 1179
examining physician: recitation of prior medical history by patient, 1179
excess of privilege: fair comment, 1188
hospital records, 2109
hypothetical question in relation to, 1179
improper use of privilege, 1188
physician-patient relationship, 1179
presence of third person, 1179
purpose of statutory privilege, 1188
right of opposing counsel to comment to jury, 1488
waiver: contract, 2109
waiver: filing of suit based on physical condition, 2109
waiver: testimony by plaintiff, 2109
ROENTGENOGRAMS: see Malpractice
SCHOOLS
osteopathic: negligence of student in clinic, 1180
SCIENTIFIC TESTS: See Evidence
STUDENTS
liability for negligence of, 1180
negligence of: liability for, 1180
WORKMEN'S COMPENSATION ACTS
intervertebral disc: operation refused, 2111
laminectomy: operation refused, 2111
medical treatment: operations: herniated disc, 2111
medical treatment: operations: laminectomy: refusal to submit, 2111
medical treatment: operations: laminectomy: refusal to undergo, 2111
medical treatment: operations: major, 2111
medical treatment: operations: refusal to undergo, 2111
physical examination: court appointed expert, 1062

N

NADISAN (carbutamide): See Sulfonylureas
NAILS (anatomic)
fingernails: pure white, 913
onychomycosis, x-ray resistant, treatment, 199
NALLINE: See Nalorphine
NALORPHINE HYDROCHLORIDE (N-Allylnormorphine
as analgesic, 428
β-NAPHTHYLDICHLORETHYLAMINE
treatment of Hodgkin's disease, [Rottino] 2005—ab
NARCOTICS
addiction, Council annual report on, 991
addiction, (Council reports) *1707; *1831; *1968
NARDOSTACHYS
jatamansi, hypotensive and sedative action, India, 2104
NASOPHARYNX
cancer, Brazil, 2104
tumors, malignant, [Correa] 1885—ab
NATIONAL (societies): See also Societies at end of letter S
Advisory Committee on Chronic Illness and Health of Aged, USPHS appoints, 1847
Association of Radio and Television Broadcasters, co-sponsors conference on television and radio in health field, 56; 1056
blood program, 1154—E
Conference on Physicians and Schools, "Decade of Progress in Fitness," 54—E; 57; (President's page) 1055
Conference on Rural Health, March 6-8, 2203
defense and medical education, 1440; 1443; 1458—E
Fund for Medical Education, report, 1411
health survey (developments, A.M.A. annual report) 1047; (Advisory Committee named) 1723
Intern Matching program, 457; 1029
Library of Medicine, first annual report issued, 1153—E
Medical Civil Defense Conference, annual report on, 1012
Research Council, ("Sodium Restricted Diets" available) 256; (Fellowships open) 1290; (survey of postdoctoral fellowships) 1963
Safety Congress, A.M.A. co-sponsors session on vision in industry, 354
Science Fair, Public Relations report on, 992
Science Foundation: See Foundations
voluntary health associations: brochure on objectives, organization, and financing, Canada, 1619
NATIONAL HEALTH SERVICE (England)
"bluebook full of whitewash": Guillebaud report on, 277
doctors want cost of living adjustment, 1856
French service compared, 723
increased cost of drugs, 1991
medical etiquette deterioration between family physician and consultant, 276
Ministry of Health approved rebuilding Guy's Hospital and medical school, 390
new Minister: D. C. Walker-Smith, 1735
no free operation to American visitor, 1857
prescribing gin under, 1857
reform plan, 181
NATUROPATHY: See Medicolegal Abstracts at end of letter M
NAVY, UNITED STATES
foreign officers attend U. S. Naval School, 857—1980
medical procurement program, 1445
NECATOR americanus: See Ancylostomiasis
NECK
pains relieved by lying down, non-fusion of cervical vertebral spinous process cause?, 1898
thymic cyst in, [Crawford] 753—ab
NECROSIS
intravenous norepinephrine causes, [de Alvarez] 1878—ab
NEEDLES
sterilization, to prevent hepatitis transmission, 1895
NEEDY: See Medically Indigent
NEGROES
ethnologic aspects of ABO blood groups disease associations, [Buckwalter & others] *327
first group practice with complete diagnostic facilities in Chicago, 73
NEOMYCIN
toxicity: apnea, neostigmine for, [Middleton & others] *2186
toxicity: renal failure after intraperitoneal use, [MacLean] 1637—ab
toxicity: respiratory arrest after intraperitoneal use, [Webber] 1643—ab
NEOPLASMS: See also Cancer; Sarcoma; Tumors; under region or organ affected
form of blastomycosis of cerebellum, [Aun] 2018—ab
therapeutic effect of E 39, [Verga] 1510—ab
NEOSTIGMINE
bromide, multiple-dose tablets for myasthenia gravis, [Schwab & others] *671
treatment of apnea from neomycin, [Middleton & others] *2186
NEPHRITIS
glomerulonephritis, acute and chronic, treatment, 1767

V 165
1957

NEPHRITIS—Continued
glomerulonephritis, acute hemorrhagic, urine erythrocytes after one year significant? 1769
glomerulonephritis, case registry for, [Saslaw] *1129
glomerulonephritis, chronic, Peru, 1623
Potassium-losing: See Aldosteronism
NEPHROSIS: NEPHROTIC SYNDROME: See Kidneys, diseases
NERAVAL: See Methitural
NERVES
laryngeal, recurrent, severed: uniting, 766
optic atrophy after mechlorethamine hydrochloride and ACTH for lymphoma, etiologic relationship, 2033
optic, medulloepithelioma of, [Reese] 1206—ab
optic, papilledema in poliomyelitis, [Ladwig] 403—ab
peripheral trunks, spread of soft-tissue sarcoma of extremities along, [Barber] 746—ab
phrenic, diaphragmatic paralyses due to ganglionic compression of, France, 1299
sciatic, compression of roots of, low back pain and sciatica due to, [Teneff] 1323—ab
sympathetic, lumbar, paravertebral alcohol block of, [Roedling & others] *799
vagotomy with antral exclusion for duodenal ulcer, acid secretion after, [Waddell] 1327—ab
vagotomy with gastroenterostomy for duodenal ulcer, [Hindmarsh] 744—ab
vagotomy with gastroenterostomy, vs. partial gastrectomy, [Cox] 189—ab
vagotomy with segmental resection for peptic ulcer, India, 1986
vagotomy with subtotal gastrectomy and hemigastrectomy for duodenal ulcer, [Harrower & others] *1270
NERVOUS SYSTEM
aspects of epilepsy, [Alfandary] 754—ab
changes in acute porphyria, [Hierons] 755—ab
complications of measles, [Tyler] 104—ab
disease, ataraxics in, [Pennington] 293—ab
disease, blood enzymes in, [Pearson] 113—ab
disease, Sister Elizabeth Kenny Foundation scholarships, 852
involvement in Behcet's syndrome, [Evans] 2012—ab
origin of postoperative hypotension, [Barbour & Little] *1529
peripheral and central lesions in poliomyelitis, histopathology, [Nicolau] 885—ab
reaction to antitetanic serum in patient with meningococcic meningitis, [Corsini] 2233—ab
strain, students and examinations, United Kingdom, 1305
NERVOUS SYSTEM, SYMPATHETIC
depressing agents effect on induction time and renal function in hypothermia, [Moyer] 2135—ab
lesions, cancer caused by, France, 1300
paravertebral lumbar block for peripheral vascular disease re-evaluated, [Crandell] 416—ab
NEURALGIA
facial, essential, conservative surgery in, [Guillaume] 399—ab
trigeminal, nonsurgical treatment, [Rushton & MacDonald] *137
NEUROBLASTOMA
adrenaline-secreting, in infant, [Mason] 2017—ab
Hutchison-Pepper syndrome, ocular metastases in, [Das Gupta] 409—ab
roentgenologic and pathologic study, [Kincaid] 2134—ab
treatment, vitamin B$_{12}$, United Kingdom, 90
NEURODERMATITIS
allergic, [Rostenberg] *1118
generalized, etiology, treatment, (replies) [Edmundson & Guy] 118; [original consultant] 119
NEUROEPITHELIOMA
medullo-epithelioma of optic nerve, [Reese] 1206—ab
NEUROFIBROMA
Pacchian, [Prose] 892—ab
NEUROLOGY
case histories of two Olympic champions, [Jokl] *129
examination, evaluation and management of brain-damaged patient, [Tobis & others] *2035
pediatric contribution to, [Peterman] *2161
USPHS research in training program, 858
NEUROMUSCULAR SYSTEM
degenerative disease, retinitis pigmentosa and acanthocytosis, hereditary, [Kornzweig] 1642—ab
function, evaluation of brain-damaged patient, [Tobis & others] *2035
NEUROMYASTHENIA, EPIDEMIC
in Florida, [Poskanzer] 2026—ab
in student nurses, [Shelokov] 2026—ab
NEUROPHARMACOLOGY
agents in rehabilitation of chronic mental illness, [Ferguson] *1677
USPHS research center organized, 858
NEUROSURGERY
care of severely injured patient: neurosurgical injuries, [White] *1924
hypotension (controlled) in, N. Z., 180
NEUROSYPHILIS: See also Tabes Dorsalis
treatment in presence of penicillin allergy, 912
NEVUS
flammeus, treatment, 1360
melanocytic (pigmented), management, [Shaffer] 1084—ab
pigmented, electrodesiccation, biopsy studies, [Walton] 1509—ab
NEW YORK UNIVERSITY
grants to Bellevue center, (pathology training) 850; (for rehabilitating facially disfigured) 1284; (for new hospital) 1463; 1716; 1976
physical medicine and rehabilitation chair created, 373
NEWSPAPERS: See Press
NIACIN: See Nicotinic Acid
NIADRIN: See Isoniazid
NICONYL: See Isoniazid
NICOTESE: See Nicotinic Acid
NICOTINIC ACID
effect on kidney, diuretic when combined with ascorbic acid? 1770
large doses to reduce blood cholesterol, [Parsons & Elins] *234
NICOZIDE: See Isoniazid
NIEMANN-PICK DISEASE
in 2 of 3 children, pregnancy advisable after? 764
NITRITES
poisoning of babies, United Kingdom, 1991
NITROGEN
balance, nutrition in surgery, 1830—E
NITROGEN MUSTARDS: See also Chlorambucil; Mechlorethamine
Yperite derivatives preoperatively in digestive tract cancer, [Maur] 750—ab
NITROGLYCERIN: See Glyceryl Trinitrate
NIVAQUINE: See Chloroquine
NODULES
rheumatic, subcutaneous, without other rheumatic pathology, 1516
NOISE
deafness in ship builders from, Finland, 86
industrial, and loss of hearing problem, A. M. A. Committee annual report, 1007
NOMENCLATURE: See Terminology
NONSUPPORT, paternity tests in criminal proceedings for, [Medicine and the Law] 2204
NORADRENALINE: See Arterenol
L-NORADRENALINE: See Levarterenol
NOR-EPINEPHRINE: See Arterenol
NORTHWESTERN UNIVERSITY
audiology and speech fellowships, 618
traffic accident research program, 1063
NOSE
douching daily after submucous electrocoagulation and clipping of inferior turbinates for vasomotor rhinitis, 424
unilateral discharge probably spontaneous cerebrospinal leak, 2034
NOVOBIOCIN
side-effects, incidence, especially allergy, 641
sodium, parenteral use, N. N. D., 1145
NOVOCAIN: See Procaine
NUCLEAR ENERGY: See Atomic Energy
NUFFIELD, William Richard Morris, 1st viscount
80th birthday celebration, United Kingdom, 1625
NUPASAL: See Isonicotinic Acid Hydrazides, o-hydroxybenzal
NURSERY: See Hospitals, nursery
NURSES AND NURSING
BCG vaccinated nurses, tuberculosis in, [De Friez] 1760—ab
dental prophylaxis, nurse training, N. Z., 180
industrial nursing, A. M. A. Committee annual report, 1006
nursing care, survey of patient opinion, 1978
student nurses, outbreak of epidemic neuromyasthenia in, [Shelokov] 2026—ab
training in public health, India, 1300
NUTRITION
A. M. A., Council annual report, 999
Borden award and Osborne and Mendel award for research in, 851
in pregnancy, symposium, (Council announcement and program) 49; 57—E; 604—E
in surgical patient, 1830—E
malnutrition, aortic changes, India, 273
problems in aging and the aged, (Council article) [Pollack] *257
research grants awarded, 1605
NYDRAZID: See Isoniazid
NYLON
prostheses for abdominal aneurysms, [Hardin] 1326—ab
sutures, contaminants, sterilization method, 116
NYSTATIN
treatment (local) in oral histoplasmosis, [Plotnick & Cerri] *346

O

OBESITY
cardiorespiratory syndrome in, [Lillington] 1184—ab
death from slimming using dextro-amphetamine sulfate, United Kingdom, 1303
extreme, uterine cancer treatment in, 1359
in diabetes, Preludin for, [Robillard] 896—ab
treating overweight patients, [Thorpe] *1361
treatment, phenmetrazine hydrochloride, [Ressler] *135
treatment, sodium liothyronine, [Morton] *124
OBITUARIES: See Deaths at end of letter D
OBSTETRICIAN
role in postpartum mental disorders, [White & others] *138
OBSTETRICS
analgesia and anesthesia in general practice, [Bonica] *2146
general and regional anesthesia compared in, [Apgar & others] *2155; 2198—E
OCCUPATIONAL Dermatoses: Diseases, Health, etc.: See under Industrial
OCCUPATIONAL THERAPY
schools for, 1455
stabilizing effect on chronic psychotics with aggressive behavior, [Robin] 1332—ab
training in Veterans Administration, 379
OCHRONOSIS
[Thompson] 903—ab
studies, death from ochronotic nephrosis, [Cooper] 1211—ab
OIDIUM (Candida) albicans Infection: See Moniliasis
OIL: See also Cod Liver Oil; Iodized Oil; Petrolatum, liquid
fired boilers, vanadium poisoning in, United Kingdom, 723
of Wintergreen: See Methyl Salicylate
OLD AGE
aging of arteries in relation to hypertension, [Conway] 732—ab
A. M. A. Committee on Aging, annual report, 1033
A. M. A. Conference on Aging, 1570
A. M. A. series on aspects of aging, (exercise) [White] *70; (health maintenance) [Hoke] *164; (nutrition problems) [Pollack] *257; (rehabilitation and restorative services) [Rusk & Dacso] *360; (fatigue control) [Klumpp] *605; (senior citizen and community) [Swartz] *694; (posture) [Freeman] *843; (housing) [Nicholson] *1058; (retirement preparation) [Breckinridge] *1965
bronchogenic carcinoma and pneumonia in, differential diagnosis, [Shields] 1317—ab
dry mouth and tongue in, etiology, treatment, 115
health problems, challenge to preventive medicine, [Burney] *440
hospital care for aged under social security, 841; 1283; (President's Page) 1701
hypersplenism in, [Schwartz] 397—ab
intra-atrial septum persistence in, [Barboni] 304—ab
premature, relation to arcus senilis in young persons, 204
programs in New York City, 2094
research grant to Duke U., 78; 263
retirement, medicine's biggest battle, (reply) [Kassel] 1488—C
spine changes in, Finland, 1985
USPHS National Advisory Committee on Chronic Illness and Health of Aged, 1847
urethritis in women, [Youngblood] 2234—ab
vibration sense in, Canada, 1173
OLEANDOMYCIN
tetracycline with, in vitro and antibacterial action of blood after, [Jones] 2237—ab
OLIGOPHRENIA, PHENYLPYRUVIC: See Phenylketonuria
OLYMPIC GAMES
champions, neurological case histories, [Jokl] *129
OMPHALOCELE: See Umbilicus, hernia
ONYCHOMYCOSIS
x-ray resistant, treatment, 199
OPERATING ROOM: See Surgery
OPERATION: See Surgery; under names of specific organ and disease
Standard Nomenclature: See Terminology
OPHTHALMODYNAMOMETRY in diagnosis of carotid artery occlusion, [Wood & Toole] *1264
OPHTHALMOLOGY
fellowship winners, 171
industrial, A. M. A. Committee, annual report, 1007

OPHTHALMOLOGY—Continued
USPHS travel fund for International Ophthalmology Congress, 1981
OPTIC PATHWAY
gliomas, in childhood, [Fowler] 2120—ab
ORABETIC (carbutamide): See Sulfonylureas
ORANGE
drinks, milkmen's, deficient in ascorbic acid, United Kingdom, 1174
ORANIL (carbutamide): See Sulfonylureas
ORINASE (tolbutamide): See Sulfonylureas
ORLON
prostheses for abdominal aneurysms, [Hardin] 1326—ab
ORNITHOSIS
turkeys transmit, [Graber] 1752—ab
OROYA FEVER
homage to D. A. Carrión who proved verruga peruana has same etiology, Peru, 1622
ORPHANS: See Children
ORTHOPEDICS
management of severely injured patient, [McCarroll] *1913
surgery, serendipity and research, [Compere] *2070; 2088—E
ORTHOPTICS
definition, value in eye deviations, 1219
OSTEOARTHRITIS: See Joints, degenerative joint disease
OSTEOLYSIS
acro-, of extremities, familial ulcers, mutilating lesions, [Bogaert] 2006—ab
OSTEOMALACIA
aminoaciduria, renal tubular resorption anomaly with: Fanconi's syndrome, [Astrup] 285—ab
OSTEOMYELITIS
Salmonella, and abnormal hemoglobin disease, [Silver] 2015—ab
OSTEOPATHY: See "Malpractice" under Medicolegal Abstracts at end of letter M
OSTEOPOROSIS
complication of prednisone and prednisolone therapy in allergy, [Bukantz & Aubuchon] *1256
OSTEOSCLEROSIS
fluoride, [Stevenson] 904—ab
OTITIS, EXTERNAL: See Ear
OTITIS MEDIA
aerotitis, [Schechter] 1885—ab
OTOLOGY
advances in, [Hoople] *232
OTOSCLEROSIS
dry fenestra novovalis operation for, [Lempert] *229
relation to chronic catarrhal deafness, (replies) [Merrill; and original consultant] 426
OVARY
cancer, metastatic, [Ahumada] 1198—ab
excision plus adrenalectomy in metastatic breast cancer, [Dao & Huggins] *1793
tumor registry, study feminizing mesenchymomas from, [Greene] 632—ab
tumors, mesenchymomas, Brazil, 2214
OVIDUCTS
torsion, surgical complication of pregnancy, [Barter & Rovner] *317
OXALOSIS
[Simko] 1749—ab
new metabolic disease of "storage" type, [DeToni] 1341—ab
OXAMYCIN: See Cycloserine
OXYGEN
deficiency in emphysema, relief by oxygen, [Simpson] 1497—ab
levels in postmature fetus, [Kohl] *1659
routine use for myocardial infarction? 1648
OXYGENATOR PUMP (mechanical heart)
for open heart surgery, (Cross) 101—ab; [Keown & others] *781; (physiological response) [DeWall & others] *1788
OXYTETRACYCLINE
treatment of bronchiectasis, United Kingdom, 275
treatment of chronic amebiasis, [Ruiz Sanchez] 2020—ab
treatment plus hydrocortisone in ophthalmology, [Berman] 2019—ab
treatment plus viomycin in pulmonary tuberculosis, [Pines] 410—ab
OXYURIASIS
treatment, dithiazanine, effective, [Swartzwelder & others] *2063
treatment, limit to courses of piperazine citrate and methylrosaniline chloride, 1226

P

PAS: See Aminosalicylic Acid
PACINIAN neurofibroma, [Prose] 892—ab
PAGET'S DISEASE
malignant vulvar, [Woodruff] 886—ab
PAIN
abdominal: diagnosis, pathogenesis, therapy, 2029
abdominal, paroxysmal, as manifestation of epilepsy, [O'Brien] 1879—ab
PAIN—Continued
abdominal, recurrent in boy 8, epinephrine test for allergy, (reply) [Rosen] 1520
after herpes zoster, etiology, treatment, 313
chest, as only symptom of gastric ulcer, [Shedrow] 2011—ab
chronic intolerable: mechanism, electroshock therapy for, [von Hagen] *773; (reply) [Lemere] 1861—C
in knee with drop foot and hemoptysis, (Diagnostic Problems) [Kushner & Szanto] *2193
lightning, from tabes dorsalis, treatment, 314
painful shoulder syndrome, atypical, [Brusadelli] 1186—ab
persistent, after hernia repair, quinine and urea hydrochloride for, (reply) [Watson] 642
residual iodized oil in back cause? 114
suprapubic, in recurring infectious thrombophlebitis, 164:1857, Aug. 17, 1957; (correction) 165:711, Oct. 12, 1957
threshold; analgesic for, [Research Reviews] 427
treatment, placebos, codeine phosphate and propoxyphene hydrochloride compared, (reply) [Lasagna] 91—C
PAINT
luminous, on bedroom slippers, and radiation, 1514
on children's toys, lead poisoning hazard from, [Miscellany] 1996
PAMISYL: See Aminosalicylic Acid
PANCREAS
accessory spleen in tail, [Halpert] 2131—ab
annular, [Whelan] 1505—ab
calcinosis and chronic relapsing pancreatitis, total pancreatectomy for, [Barrett] 1194—ab
cancer, in infant, pancreatoduodenectomy for, [Becker] 744—ab
disease, secretin test in diagnosis, [Dreiling] 2118—ab
enzymes for radiation lesions, [Bacchi] 898—ab
fibrocystic disease, diagnosis by sweat electrolytes, United Kingdom, 390
fibrocystic disease, intrinsic bronchial asthma as manifestation, [Derbes] 1341—ab
fibrocystic disease, resection of pulmonary lesions associated with, [Kulczycki] 1338—ab
tumors, adenoma (metastasizing) with exocrine secretion, [Schmid] 900—ab
tumors, islet adenomatosis, United Kingdom, 1992
PANCREATITIS
acute, in children, [Blumenstock] 407—ab
chronic relapsing, and calcinosis of pancreas, total pancreatectomy for, [Barrett] 1194—ab
chronic relapsing, pancreaticoduodenectomy for, metabolic defects after, [Jordan] 402—ab
chronic, surgical treatment, [Bowers] 752—ab
diagnostic clue to hyperparathyroidism, [Cope] 744—ab
hereditary, [Gross] 1320—ab
postgastrectomy, acute, [Burton] 1501—ab
postoperative, fatal, [Ferris] 1505—ab
treatment, pancreaticojejunostomy, [DuVal] 288—ab
PANMYCIN: See Tetracycline
PANTOTHENYL ALCOHOL
stimulates intestinal motility after surgery with? 763
PAPILLEDEMA: See Nerves, optic
PAPILLOMA
of breast, intraductal, [Hendrick] 1500—ab
PARA-AMINOSALICYLIC ACID: See Aminosalicylic Acid
PARAKEETS
isolation to prevent transmission of psittacosis, 133
PARALYSIS
agitans, procyclidine hydrochloride for, [Zier] 1332—ab
agitans, reserpine-induced, protection against, [Rashkis] 734—ab
brachial plexus, H. V. Connolly, Olympic champion with, [Jokl] *129
cerebral, in children, evaluation of zoxazolamine in, [Watkins & Hale] *830
cerebral, USPHS research grant, 1611
diaphragmatic, due to ganglionic compression of phrenic nerve, France, 1299
familial paroxysmal paralytic myoglobinuria, [Fitz] 1079—ab
Landry's, after Salk vaccination, [Uehlinger] 1337—ab
periodic, familial, with hyperkalemia; hereditary episodic adynamia, [Kaplan] 1331—ab
poliomyelitis, distribution of, [Valle] 403—ab
Salk vaccine effect on severity of, [Wyman] 1197—ab
tick, [Wilkes] 874—C
unilateral, of sixth cranial nerve and pregnancy relationship, 2141
PARAMYOCLONUS
multiplex, etiology and treatment, 1224
PARA-PAS: PARASAL: See Aminosalicylic Acid
PARAPLEGIA
in male, sexology in, [Zeitlin] 1641—ab
rehabilitation in, VA pamphlet on, 173
PARASITES: See also Helminthic Diseases
intestinal, Peru, 1987
PARATHYROID
hyperparathyroidism, changing diagnostic criteria for, [Goldman] 2120—ab
hyperparathyroidism, pancreatitis as diagnostic clue to, [Cope] 744—ab
PARAZINE: See Piperazine Citrate
PARENZYME: See Trypsin
PARESTHESIA: See Meralgia paresthetica
PARINAUD'S SYNDROME
oculoglandular form of cat-scratch disease, [Levitt] *1955
PARKINSONISM: See Paralysis agitans
PAROTID GLAND
cancer, recurrent, radical surgery for, 2033
region, adenolymphomas of, [Vilkari] 1756—ab
surgery, radical, facial rehabilitation following, [Conley] 895—ab
PAROTITIS
herpangina and, with presence of Coxsackie virus, (Canada) 623; [Howlett] 875—ab
premenstrual recurrent, nonspecific: treatment, 203
recurrent, etiology, treatment, 2139
PAROTITIS, EPIDEMIC: See Mumps
PATERNITY: See also Medicolegal Abstracts at end of letter M
prevent congenital anomalies by alpha tocopherol, [Shute] 634—ab
tests in criminal proceedings for nonsupport, [Medicine and the Law] 2204
PATHOLOGY
dermal, Osborne fellowship in, 710
of diurnal pattern, Austria, 1618
of regional enteritis, [Lalpply] *2052
radioisotopes seminar for pathologists, 855
training grants to N. Y. U., 850
PATIENTS
blood pressure determination by, at home, in long-term hypertension therapy, [Hoobler] *2143
Chronically Ill: See Disease, chronic
dying, courtesy to relatives of, Norway, 870
explaining to, therapeutic tool and professional obligation, [Ernstene] *1110; 1152—E
opinion, survey on nursing care, 1978
peregrinating problem: Munchausen's syndrome, [Chapman] *927; [Reisner] 2108-C
physician relationship, format of medicolegal forms, [Medicine and the Law] *612
right to privacy, proper forms for, [Medicine and the Law] 167
PEDIATRICS
Arvo Ylppö medal of Finland to Dr. C. A. Smith, Mass., 1462
aspects of placental dysfunction syndrome in postmaturity, [Clifford] *1663
contributions to neurology, [Peterman] *2161
dosage of corticosteroid hormones, (replies) [Trimble; and original consultant] 120
education in India, 1855
residency fellowships, 854; 1286
"PEGA PALO"
"vine that makes you virile," the answer? [Bureau of Investigation] 695
PELVIS
infections, cortisone and antibiotics for resistant ones, [Hurtig] 191—ab
size and shape, fetopelvic grading of breech presentations, [Kaltreider] *1132
surgery, hemipelvectomy, for malignant disease, [Lewis & Bickel] *8
surgery in woman 54, hormonal imbalance with sweating after, 2031
PEMPHIGUS
treatment, corticosteroids, [Costello & others] *1249
PENICILLIN
Benzathine G: See Benzathine Penicillin G
G, potassium, with citrate daily, effect on blood, 765
Phenoxymethyl: See Phenoxymethyl Penicillin
procaine, with benzathine penicillin G for children with acute respiratory infections, [Githens] 1085—ab
prophylaxis after exposure to venereal disease, 914
prophylaxis of rheumatic fever, (duration) 909; (blood levels) [Mozziconacci] 1085—ab
prophylaxis of rheumatic fever recurrence with oral doses, [Dowd] 194—ab
resistance in cattle, United Kingdom, 389
resistant staphylococcal pericarditis, [Nieman] 1184—ab
re-treatment of asymptomatic syphilis after 16 years, 113
sensitive streptococcal endocarditis, penicillin V and streptomycin for, [Walker] 2116—ab
toxicity: acute immediate reactions, [Lewis] 107—ab
toxicity: allergy, rheumatic fever prophylaxis in presence of, 423

V 16
1957

PENICILLIN—Continued
toxicity: allergy, treatment of neurosyphilis in presence of, 912
toxicity fatal, evaluate test for sensitivity, [Smith] 2127—ab
toxicity: mucocutaneous allergic reactions, [Ström] 1510—ab
toxicity of procaine type: psychic reactions, Sweden, 1624
toxicity: penicillinase for reactions, [Minno & Davis] *222
treatment alone or combined in endocarditis lenta, [Kalpalnen] 2008—ab
treatment (massive) in meningococcal and pneumococcal meningitis in childhood [Friedericzick] 1342—ab
treatment of acne for 6 months, hazards of, 1359
treatment of primary-secondary syphilis after mercury cyanide, [Bolgert] 1498—ab
treatment of syphilis, corticotherapy in, [de Graciansky] 636—ab
treatment, prolonged in bronchiectasis, United Kingdom, 275
V: See Phenoxymethyl Penicillin
PENICILLINASE
treatment of penicillin reactions, [Minno & Davis] *222
PENIS
absence, congenital, [Haller] 1885—ab
PENTOLINIUM TARTRATE
treatment of arterial hypertension, [Rønnov-Jessen] 1080—ab
PENTYLENETETRAZOLE
treatment of mental deficiency, [Berman] 2233—ab
PEN-VEE: See: Phenoxymethyl Penicillin
PEPSINOGEN in Blood: See Blood pepsinogen
PEPTIC ULCER
diagnosis, "string test" for? 1089
ethnologic aspects of **ABO** blood groups in, [Buckwalter & others] *327
etiology: drug-induced, 1960—E
etiology: prednisone and prednisolone in rheumatoid arthritis, [Stolzer & others] *13
etiology: seed disinfectant, Ceresan M? 1769
etiology: therapy for rheumatoid arthritis, [Kern] 1742—ab
etiology: trauma relationship, 1895
gastric, and **ABO** blood-groups, [Balme] 876—ab
gastric, chest pain as only symptom, [Shedrow] 2011—ab
gastric, large benign, clinicopathologic study, [Turner] 287—ab
gastric, risk of stomach cancer after medical treatment, [Doll] 2230—ab
hemorrhage from, [Weber & others] *1899
multiple endocrine tumors and, [Fisher] 899—ab
peptic esophagitis complicating hiatus hernia, [Lindskog] 1319—ab
perforated duodenal, treatment after surgery for, 314
perforated, simple closure, [McCaughan] 2229—ab
postbulbar duodenal, [Shaiken] 734—ab
surgical treatment, antral exclusion with vagotomy for duodenal type, acid secretion after, [Waddell] 1327—ab
surgical treatment, gastroenterostomy with vagotomy, [Hindmarsh] 744—ab
surgical treatment, intra-abdominal complications after distal subtotal gastrectomy, [Pearce] 2229—ab
surgical treatment of gastric type, Denmark, 1733
surgical treatment, partial gastrectomy vs. vagotomy-gastroenterostomy, [Cox] 189—ab
surgical treatment, subtotal gastrectomy and hemigastrectomy with vagotomy for duodenal type, [Harrower & others] *1270
surgical treatment, Sweden, 626
surgical treatment, vagotomy with segmental resection for, India, 1986
PERIARTERITIS
nodosa, **ACTH** or cortisone for, [Johnsson] 1319—ab
nodosa with Cogan's syndrome, [Crawford] 1081—ab
PERICARDITIS
benign acute, Coxsackie virus in, [Weinstein] 1495—ab
constrictive, intraventricular pressure tracings in, physiological explanation, 1897
constrictive, pericardiectomy for, [Harvard] 1190—ab
hemorrhagic, complicating myocardial infarction, [Dressler] 875—ab
staphylococcal, penicillin-resistant, [Nieman] 1184—ab
PERICARDIUM
electrical ventricular defibrillation, epicardial burns and late mortality relationships, [Kortz] 400—ab
fat necrosis, [Jackson] 101—ab
PERIODICALS: See Journals
PERIODONTAL DISEASE (pyorrhea)
India, 2105
PERITONITIS
postoperative, mechanism, [Sahlin] 1876—ab
treatment, corticosteroid hormones, 112
PERMAPEN: See Benzathine Penicillin G
PERPHENAZINE
new tranquilizer, Canada, 720
PERTUSSIS: See Whooping Cough
PESSARIES
intrauterine, hazards of, [Weilerstein] 2096—ab
PESTICIDES
A. M. A. Committee annual report on, 1002
thallotoxicosis, recurring problem, (Council report) 1566
PETHIDINE: See Meperidine
PETROLATUM
liquid, to prevent irritation during administration of ultrasound treatment, 2140
PEUTZ-JEGHERS SYNDROME
[Richterich] 732—ab
hereditary, [Rohrs] *208
polyposis of gastrointestinal tract, [Bailey] 2224—ab
PHARYNGITIS
streptococcic, benzathine penicillin G to prevent, [Morris & Rammelkamp] *664
subacute thyroiditis commonly mistaken for, [Volpe] 2117—ab
PHARYNGOCONJUNCTIVAL FEVER: See Adenovirus
PHARYNX
residual disability after poliomyelitis, management, [Rosma] *216
PHENACYLCODOL
N. N. D., 157
PHENERGAN: See Promethazine
PHENINDIONE
treatment of thromboembolism evaluated, [Nellson] 186—ab
PHENMETRAZINE HYDROCHLORIDE
treatment of obesity, [Ressler] *135; (in diabetics) [Robillard] 896—ab
PHENOTHIAZINE
derivatives, convulsant action of, [Fazekas & others] *1241
PHENOXYBENZAMINE HYDROCHLORIDE
controlled hypotension in neurosurgery with, N. Z., 180
PHENOXYMETHYL PENICILLIN
penicillin-resistant staphylococcal infections, response to, [Burn] 1753—ab
treatment of subacute bacterial endocarditis, [Santos-Buch] 1494—ab
treatment plus streptomycin in streptococcal endocarditis, [Walker] 2116—ab
PHENYLALANINE
restricted diet in phenylketonuria, [Horner] 299—ab; (Council report) [Wright] *2079
PHENYLBUTAZONE
toxicity: acute renal injuries, [Scheitlin] 1209—ab
toxicity: peptic ulceration, [Kern] 1742—ab
treatment of thrombophlebitis, [Host] 637—ab
PHENYLINDANDIONE: See Phenindione
PHENYLKETONURIA
(Council report) [Wright] *2079
borderline intelligence in, [Hsia] 757—ab
diagnosis by diaper ferric chloride test, [Centerwall] 392—C; 2219—C
in child with normal intelligence, [Bickel] 408—ab; (and Gowers' muscular dystrophy) [Coates] 1882—ab
phenylalanine-restricted diet in, [Horner] 299—ab
urine ferric chloride test positive in, 200
variability in manifestations of untreated cases, [Paine] 1751—ab
PHENYLMERCURIC ACETATE
antiseptic for laundering diapers, 254—E; (correction) 1163
PHENYLPYRUVIC OLIGOPHRENIA: See Phenylketonuria
PHEOCHROMOCYTOMA
anesthesia for tonsillectomy after removal of, 1225
diagnosis: assay of urine, piperoxan hydrochloride-antidiuresis during normotensive phase, [Masson & others] *1555
differentiate from essential hypertension, urine catecholamines in, [Henry] 1869—ab
5 cases, one a spontaneous cure, [Albers] 1320—ab
in children, surgical aspects, 3 cases, [Clausen] 2121—ab
PHILADELPHIA, welcomes clinical meeting, 955; (photos) 956—958
PHLEBITIS
medical management of thrombophlebitis and postphlebitic syndrome in, [Kramer & Medeiros] *767
surgical treatment, Belgium, 1297
treatment, warfarin sodium, [Fremont & Jagendorf] *1381
PHLEBOGRAPHY: See Veins, roentgen study
PHONOGRAPH RECORDS
creating library of, [Leisure Corner] *97
PHOSPHATASE
hypophosphatasia, [Currarino] 2134—ab
PHOSPHATES
chromic, radioactive colloidal, transcystoscopic injection of bladder tumors, [Christensen] 1640—ab
organic insecticides, test for blood cholinesterase in workers exposed to, 315
PHTHISIOLOGIST, to lung specialist, Sweden, 1302
PHYSICAL EXAMINATION: See also Medicolegal Abstracts at end of letter M
A. M. A. Committee annual report, 1007
free health survey, Sweden, 1625
neurological, in brain-damaged patient, [Tobis & others] *2035
PHYSICAL FITNESS
A. M. A. annual report on, 1016
of American youth, (1956 conference report available, further programs) 54—E; (correction) 377; (role of physicians, and A. M. A. in, President's page) 1055
PHYSICAL MEDICINE
role in rheumatic heart disease, [Newman] *1547
PHYSICAL THERAPISTS
schools for, 1456
PHYSICIANS: See also General Practitioners; Specialties; under name of specific Specialists, as Surgeons
American, on television, Oct. 27, 841
at site of street traffic accidents, first-aid, [Carstensen] 2123—ab
avocations, artists, honor four, exhibit tours, 56
avocations, choral singing, [Leisure Corner] 2221
avocations, creating library of music records, [Leisure Corner] 97
avocations, fun at the piano, [Leisure Corner] 1863
avocations, let's go bowling, [Leisure Corner] 727
avocations, mountain climbing, (reply) [Meuener] 91—C
avocations, radio amateur operators, "CQ for M. D.'s," [Leisure Corner] 1308; (reply) [Blake] 2220—C
avocations, Wisconsin Bowling Tournament, 2096
complaint against, basis for libel action by, [Medicine and the Law] *259
Deaths: See also list of Deaths at end of letter D
death of John H. Fitzgibbon, A. M. A. Trustee, (photo) 620
death of Sir Charles Read, president of Royal College of Obstetricians and Gynecologists, 619; 1075
family physician and consultant, deterioration of etiquette between, United Kingdom, 90; 276
family physician and delinquent child, [Brickman] *339
family physician, poliomyelitis risk to, United Kingdom, 391
family requirements for British Embassy in Moscow, 390
foreign, Educational Council for, 1431; 1706
foreign graduates, 458
foreign interns and residents in U. S., 852; [McCormack & Feraru] *1388
foreign officers, U. S. navy courses for, 857; 1980
Hungarian, WMA help for, (Medicine at Work) [Golin] *49
injured boy charged $1 by, United Kingdom, 2217
"MD International," television program, 2092; 2203
medical school tuition refunded under "doctor for community" program, 352—E; 355
not in private practice, society membership for, (reply) [Salkin] 1994—C
patient relationship, explaining to, [Ernstene] *1110; 1152—E
patient relationship, format of medicolegal forms, [Medicine and the Law] *612
Physician Association of American Medical Colleges, future need for, 1402
placement assistance, annual report, 1010
placement service, annual report, 1044
poliomyelitis vaccination reminders mailed to, 1153—E
role in air travel, [Spiegel] *205; (reply) [Lederer] 1187—C
role in community cooperation in public health, 1831—E
role in drug control, twixt the cup and the lip, [Dowling] *657; 688—E
role in fitness of American youth, (President's page) 1055
role in preparing patient for retirement, (Council article) [Breckinridge] 1965

PHYSICIANS—Continued
schools and, national conference, "Decade of Progress in Fitness," 54—E; 57
Social Security for: See Social Security
supply, shortage, Sweden, 1624
supply, states having largest enrollments in postgraduate courses, 1433
treat confessed uncooperative patient without his consent? 1226
troop ratio, change in, 1010
veteran, testimonials for centenarians in Pennsylvania, 2207
want cost of living adjustment, United Kingdom, 1856
women, first Afghan woman doctor enrolls as special student at Woman's Medical College of Pennsylvania, 1717
women, first Latin-American association organized, Peru, 87
PHYSICS, MEDICAL
A. M. A. Council on, annual report, 1001
PHYSIOLOGY
of diurnal pattern, Austria, 1618
PHYTONADIONE (vitamin K1)
treatment (oral) in bishydroxycoumarin-induced hypoprothrombinemia, [Shoshkes & others] 330
PIANO, fun at, [Leisure Corner] *1863
PIGMENTATION
depigmentation after exposure to sunlight, 1226
disturbance in Addison's disease, nature of, [Hudson] 1185—ab
spots of lips and intestinal polyposis in hereditary Peutz-Jeghers syndrome, [Rohrs] *208; [Bailey] 2224—ab
PILLOWS
infections from, epidemiology, 1222
PINWORM INFECTION: See Oxyuriasis
PIPERAZINE CITRATE
treatment of helminthiasis, [Schwartzwelder] 1754—ab
treatment of oxyuriasis, limit to number of courses, 1226
PIPEROXAN HYDROCHLORIDE
antidiuresis during normotensive phase in pheochromocytoma, [Masson & others] *1555
treatment of local ischemia due to levarterenol leakage, [Pelner] *444
PIPIZAN: See Piperazine Citrate
PITUITARY
anemia from disorders of diencephalon and, [Leprat] 181—ab
anterior insufficiency after postpartum hemorrhage: Sheehan's syndrome, [Aarskog] 188]—ab
effect of division of hypophysial stalk in hypertension, [Keedy] 881—ab
excision for advanced breast cancer, [Hollander] 295—ab
Hormones: See Corticotropin; Somatotropin
study grant, N. C., 74
tumors hypogonadism and hypothyroidism in relation, [Cauchey] 1197—ab
PLACEBO
codeine phosphate and propoxyphene hydrochloride compared for pain, (reply) [Lasagna] 91—C
controlled study of prednisone and aspirin in degenerative joint disease, [Williams] 1755—ab
in evaluating Asian influenza vaccine, [Culver & others] *2171
in evaluating azacyclonol in chronic schizophrenia, [Odland] *333
in evaluating phenmetrazine hydrochloride for obesity, [Resler] *135
in evaluating zoxazolamine and/or chlorpromazine for muscle spasm, [Gibson & others] *18
in evaluating zoxazolamine for cerebral palsy in children, [Watkins & Hale] *830
PLACEMENT: See Physicians
PLACENTA
dysfunction syndrome in postmaturity, pediatric aspects, [Clifford] *1663
transmission of cyclopropane across, anesthesia in obstetrics, [Apgar & others] *2155; 2198—E
transmission of L. E. factor, [Berlyne] 1336—ab
transmission of poliomyelitis, [Barsky] 1747—ab
transmission of poliomyelitis antibodies, (Canada) 1171; [Strean] 1748—ab
transplacental hemorrhage from fetus to mother, shock in newborn from, [Shiller] 1199—ab
PLANTIDYL: See Ethchlorvynol
PLAGUE
bubonic, in young girl, 1718
PLANING
for lichen sclerosus et atrophicus with oral involvement, [Miller] 891—ab
PLASMA: See also under various subheads of Blood
PLASMA—Continued
oral ingestion, hazards of, 1358
Transfusion: See Blood Transfusion
PLASTIC
grafts for aorta, [Shumacker] 1873—ab
manufacture, toxicity from styrene and methyl ethyl ketone peroxide, 201
tracheostomy button, [Moore] *1276
PLEURA
intrapleural pressure, India, 867
parietal, aspiration biopsy, [Donohoe] 740—ab
sarcoma (metastatic), from knee, (Diagnostic Problems) [Kushner & Szanto] *2193
PLEURISY
complicating myocardial infarction, [Dressler] 875—ab
unusual case with amebiasis, Austria, 84
with effusion, topical hydrocortisone and prednisolone in, [Miglio] 2119—ab
PLEUROPNEUMONIA-LIKE ORGANISM
hemorrhagic cystitis associated with, [Berg] 302—ab
PLOMBAGE
in surgical treatment of tuberculosis of lung, [Joly] 1192—ab
PNEUMONIA
complicating myocardial infarction, [Dressler] 875—ab
differential diagnosis of bronchogenic carcinoma and, after 40, [Shields] 1317—ab
Friedlander's, x-ray diagnosis possible? 1896
hemoglobin: causes fever in valvular heart disease, [Ross & others] *1
interstitial, in nursing infants: epidemiology, therapy, prophylaxis, [von Berlin-Helmendahl] 1339—ab
meningitis, Klebsiella, cortisone and antibacterials successful in adult, [Sterkel] 740—ab
varicella, [Hunnicutt] 1633—ab
virus, clinical considerations, [Carotti] 1315—ab
PNEUMONOCONIOSIS
breathless coal workers, [Martin] 636—ab
feldspar dust, risk of silicosis from? 909
graphite, industrial, (replies) [Liber; and original consultant] 914
prednisone effect in silicosis, [Slaviero] 738—ab
PNEUMOTHORAX, SPONTANEOUS
unilateral, bilateral therapy for, [Baronofsky] 2009—ab
POISON CONTROL CENTERS
Academy of Medicine of Cleveland report of first six weeks, 1159
cards with location and telephone number of 5 in N. Y. distributed, 372
first-aid measures for poisoning and, (reply) [Cann] 1994—C
POISONING
acetylsalicylic acid, hemodialysis in, [Dalgard] 1751—ab
acute barbiturate, [Koppanyi] 739—ab
A. M. A. Committee on Toxicology, annual report, 1003
carbon monoxide, (electrocardiom in) [Myschetzky] 294—ab; (statistics on, United Kingdom) 1858
first-aid measures for: A. M. A. recommendations, (Council report) *686; (reply) [Cann] 1994—C
Food: See Food poisoning
glutethimide, fatal in 4 cases, [McBay] 1343—ab
grave intoxications, adrenal cortical steroids for, [Andersen] 1887—ab
in Children: See Children
Industrial: See Industrial Dermatoses; Industrial Diseases
lead, calcium versenate in, [Meyers] 1752—ab
lead, hazard from paint on children's toys, [Miscellany] 1996
nitrite, of babies, United Kingdom, 1991
salicylate, intermittent positive pressure respiration for, [Freier] 303—ab
sodium bicarbonate, United Kingdom, 871
Solox, [Hammack] *24
viper venom, experimental, India, 868
POLIOENCEPHALITIS
clinical and laboratory study, [Snell] 1330—ab
POLIOMYELITIS
acute anterior, histopathology, peripheral and central sensory lesions, [Nicolau] 885—ab
acute phase, nonneurological lesions in, [Angela] 885—ab
acute, rehabilitation by intra-arterial growth hormone, [Henriquez] 756—ab
age and sex effect on susceptibility and clinical manifestations, [Weinstein] 885—ab
antibodies, placental transmission, (Canada) 1171; [Strean] 1748—ab
clinical aspects and therapy, [Henckel] 404—ab
complications: arterial hypertension, [Kemp] 755—ab
POLIOMYELITIS—Continued
complications: myocarditis, [Marinesco] 1756—ab
complications: papilledema in, [Ladwig] 403—ab
complications: pharyngeal disability, management, [Bosma] *216
complications: white matter lesions in, [Feigin] 404—ab
during pregnancy, is fetus damaged? [Töndury] 1341—ab
epidemiology in Basel and Swiss military units, [Berger] 194—ab
immunization during pregnancy to woman with paraplegia after poliomyelitis during previous pregnancy, 316
National Foundation for Infantile Paralysis: See Foundations
neuromyasthenia, similar disease, [Shelokov] 2026—ab
paralysis, distribution, [Valle] 403—ab
paralytic, statistics on, India, 273
prevalence, drop in, Israel, 625
prevalence, U. S., 75; 171; 265; 376; 617; 710; 855; 1066; 1161
respirator patients, acid-base balance of, [Droese] 190—ab
risk to family physicians, United Kingdom, 394
transmission by sewage-infected sea water, United Kingdom, 391
transmission, transplacental [Barsky] 1747—ab
vaccination campaign, A. M. A. Public Relations annual report on, 992
vaccination, Canada, 1171
vaccination, monarticular arthritis after, indicates gouty attack, (reply) [Kadish] 119
vaccination reminder cards mailed to all physicians, 1153—E
vaccination (Salk) acute ascending myelitis after, [Uehlinger] 1337—ab
vaccination, side-effects and complications, [Raimann] 2026—ab
vaccination urged by USPHS Secretary Folsom, 1290
vaccine (Salk), cost of administration program, [Bistoviski] 1890—ab
vaccine (Salk) effect on severity of paralysis, [Wyman] 1197—ab
vaccine (Salk), gets into Britain, 1482; 1856
vaccine (Salk), Israel, 722
vaccine, United Kingdom, 1074
viremia in newborn, [Winsser] 2125—ab
virus, United Kingdom, 2217
POLYARTERITIS: See Periarteritis
POLYARTHRITIS: See Arthritis, Rheumatoid
POLYCYCLINE: See Tetracycline
POLYCYTHEMIA
idiopathic, Denmark, 1732
iron metabolism in, Spain, 2107
renal tumors with, [Conley] 2006—ab
rubra vera, modern treatment, [Cardone] 738—ab
POLYMYXIN B SULFATE
treatment of Pseudomonas aeruginosa infection, 1770
POLYPS
intestinal, familial, report of large family, [Turner] 1328—ab
intestinal, in hereditary Peutz-Jeghers syndrome, [Rohrs] *208; [Richterich] 732—ab; [Bailey] 2224—ab
rectal, grasping hot cautery electrode to destroy, [Blaisdell] *1392
POPULATION
state, ratio of freshman students to, 1956-1957, 1426
PORPHYRIA
acute [Fischer] 397—ab; (nervous system changes in) [Hierons] 755—ab; (intermittent, diagnosis, treatment) 2030
PORTACAVAL ANASTOMOSIS
evaluation for portal hypertension, [Hallenbeck] 748—ab
fatty infiltration of liver after, Brazil, 178
PORTAL VEIN
acute ligation, [Johnstone] 288—ab
cirrhosis (Laennec's), copper metabolism in, [Gubler] 1636—ab
cirrhosis, natural history of esophageal varices in, [Palmer] 1497—ab
hypertension, rectal intraosseous venography in diagnosis, [Schobinger] 2222—ab
hypertension, evaluation of portacaval shunts for, [Hallenbeck] 748—ab
hypertension, splenectomy with ligature of inferior mesenteric vein and gastric vein for, Brazil, 1853
POSTMATURITY
A. M. A. panel reports, (clinical obstetric aspects) [Nesbitt] *1656; (oxygen levels in fetus) [Kohl] *1659; (pediatric aspects of placental dysfunction syndrome in) [Clifford] *1663
POSTOPERATIVE: See Surgery

V 16
1957

POSTURE
hypotensive collapse from chlorpromazine, Finland, 86
in aging and aged body, (Council article) [Freeman] *843
POTASSIUM
in Blood: See Blood
intoxication, cardiac arrest from: artificial kidney for, [Tu & Crockett] *1953
metabolism disturbance in thyrotoxic myopathy, [Collings] 2232—ab
Losing Nephritis: See Aldosteronism
penicillin G with citrate daily, effect on blood, 765
postoperatively, vs. aldosterone, N. Z., 2216
PREDNISOLONE
aspirin combined, United Kingdom, 873
hemisuccinate intravenously for bronchial asthma, [Sicuteri] 410—ab
Methyl—: See Methylprednisolone
toxicity: gastrointestinal side-effects, [Dordick] 898—ab
treatment, adjuvant in pulmonary tuberculosis, [Bergamini] 2127—ab
treatment in nephrotic syndrome, [Dundon] 300—ab
treatment of allergic disorders, [Bukantz & Aubuchon] *1256
treatment of ankylosing spondylitis, [Croft] 1643—ab
treatment of bronchial asthma, [Rosa] 1208—ab
treatment of infectious mononucleosis, Peru, 86
treatment of nephropathies, clinical and functional results, [Bergamini] 1321—ab
treatment of rheumatoid arthritis, evaluation: gastrointestinal manifestations, [Stolzer & others] *13
treatment of rheumatoid arthritis, evaluation: gastrointestinal manifestations, [Stolzer & others] *13
treatment plus splenectomy for hemolytic anemia due to autoantibodies, [Cantoni] 1746—ab
treatment (topical) in selected dermatoses, [Frolow] 1509—ab
vs. cortisone in rheumatoid arthritis, United Kingdom, 182; [Medical Research Council & Nuffield Foundation] 1888—ab
PREGNANCY
advisable after hereditary disease found in 2 of 3 children? 764
advisable after infant died of hydrocephalus from toxoplasmosis? 1221
age and, possibility at 20 and 30, 2244
air travel during, physician's role in, [Spiegel] *205
complications: cervical cancer, value of routine smears in detection, [Slate] 1334—ab
complications: diabetes, annual report on, 1002
complications: edema, Diamox in, [Balthrop] 405—ab
complications: evaluation of prediabetic state, [Carrington] 294—ab
complications: genital endometriosis, [Ahumada] 193—ab
complications: heart disease, India, 179
complications: hypofibrinogenemia in, [Toro] 406—ab
complications: idiopathic myocardial failure in last trimester, [Meadows] 406—ab
complications: megaloblastic anemia, folinic acid in, [Scott] 1881—ab
complications: mumps, congenital defects in infants after: chorioretinitis, [Holowach] 299—ab
complications: rectum cancer, United Kingdom, 89
complications: rubella; congenital unilateral multicystic kidney after, [Lipton] 298—ab
complications: rubella during first few days, interrupt pregnancy for? 1357
PREGNANCY—Continued
complications: rubella, incidence of defects in infants after, [Greenberg & others] *675; 688—E
complications, surgical, [Barter & Rovner] *317
complications: tuberculosis, treatment, [Schaefer & others] *2163
diet and, United Kingdom, 1304
ectopic, abdominal, [Zuspan] 1333—ab; (full term) [Leary] 1198—ab
ectopic, new etiologic factor: healed genital tuberculosis, [Halbrecht] 888—ab
effect on fetus of mother taking diuretic, 1517
fertility after, according to height and weight, [McKeown] 887—ab
hyperthyroidism and, [Battarino] 296—ab
nutrition in, symposium, (Council announcement and program) 49; 57—E; 604—E
poliomyelitis antibodies, placental transmission, [Strean] 1748—ab
poliomyelitis during, is fetus damaged? [Töndury] 1341—ab
poliomyelitis immunization to woman with paraplegia after poliomyelitis during previous pregnancy, 316
poliomyelitis transplacental transmission, [Barsky] 1747—ab
postmature, clinical obstetric aspects, [Nesbitt] *1656
relationship between unilateral paralysis of sixth cranial nerve and? 2141
third, and Rh factor: induced labor, cesarean section or sterilization indicated? 425
thyroid recovery reactivated by? 1646
thyroid medication during, prenatal effect on child, 198
Toxemia: See also Eclampsia
toxemia, amongst sufferers of premenstrual syndrome, United Kingdom, 1073
toxemia (eclamptogenic), etiology, [Bartholomew] 632—ab
toxemia, mortality from, United Kingdom, 627
toxemia probably due to endocrine disorder, India, 1174
toxemia, progesterone during symptomatic stage, [Dalton] 2013—ab
toxemia, synergism for, [Rogers] 887—ab
PRELUDIN: See Phenmetrazine Hydrochloride
PREOPERATIVE: See Surgery
PRESCRIPTIONS: See also Drugs
gin under National Health Service, 1857
PRESIDENT'S COUNCIL ON YOUTH FITNESS
Citizens' Advisory Committee, conference report, 54; (correction) 377
PRESS
A. M. A. Public Relations annual report, 991
PREVENTIVE MEDICINE
health problems of aging challenge to, [Burney] *140
mission of, [Tracy] *343
PRINTER'S INK
allergy to, desensitization possible? 1768
PRIVACY, patient's right to, proper forms for, [Medicine and the Law] 167
PRIVILEGED COMMUNICATIONS: See also Medicolegal Abstracts at end of letter M
records and, [Medicine and the Law] *259
PRIZE FIGHTING: See Boxing
PRIZES AND HONORS
American Association of Blood Banks, citation, 2095
American Association of Obstetricians and Gynecologists Foundation Prize, 2209
American Cancer Society—Charles Hayden Foundation Professor of Surgery in Cancer Research award, 1718
American College of Physicians, essay contest, 415
American Congress of Physical Medicine and Rehabilitation award, 1462
American Hospital Association, distinguished service award, 375
American Jewish Congress "Annual Award for Service to Mankind," 1844
A. M. A. Distinguished Service award, 977
A. M. A. General Practitioner award, (deadline for biographies) 1057; (award to C. W. Clark) 2089—E; 2200
American Medical Writers' Association, honor award, 1462
American Pharmaceutical Manufacturers' Association award, 1977
American Society of Anesthesiologists, distinguished service award, 1716
American Society of Maxillofacial Surgeons essay contest, 1464
"Annual Prize for Medico-Surgical Cinema," to be given March, 1958, 1718
Association of American Physicians and Surgeons, essay contest, (Miscellany) [Gustavson] *96
Association of Clinical Scientists annual award and diploma of honor, 1845
Atomic Energy Commission Distinguished Service Award, 2210
Bennett Neuropsychiatric Research Foundation's award in biological psychiatry, 1286
PRIZES AND HONORS—Continued
Bethany College Alumni Achievement award, 1977
Borden award and Osborne and Mendel award in nutrition open, 851
Burdick (Ward) award of American Society of Clinical Pathologists, 1975
Charleston Lions Club "Citizens of the Year" S. C., 1159
Colby Junior College, special award, 1461
Commonwealth Fund Senior Award for Support of Creative Research, 1461
Dearholt Medal, 2095
Dr. Guthrie, "first citizen" of Sayre, named square in his honor, Pa., 1844
Gallatin (Albert) award, first, 1717
Gerhard (William Wood) Gold Medal of Philadelphia Pathological Society, 1845
Gorgas Medal, awarded to Col. Stapp, 1722
Gould Award for Research in Laryngology established, 264
Harlow-Brooks medal, 263
Illinois Medical Society's "General Practitioner for 1958," 1461
International Academy of Proctology announces cash prize and certificate of merit, 1286
International College of Surgeons, "Master Surgeon," 618
Johnson (W. Scott) Award of Missouri Public Health Association, 707
Kimble methodology research award, 1844
Lasker (Albert) award of American Heart Association, Pa., 1604
Legion of Honor of France officers, 263; 370
Legion of Merit award of Italian Republic, Mo., 2206
Legion of Merit, First Oak Leaf Cluster to Maj. Gen. Ollin F. Mellinay, 857
Legion of Merit to Air Force medical officers, 77; 857
Loyola U. Alumni Citation for ideals of Jesuit education, 73
Lyman (David Russell) gold medal, 72
Mead Johnson Awards for Graduate Training, 1721
Medical Achievement Travel award, presented by Purdue Frederick Company, 614
Minerva award for medical film to Drs. Hans von Leden and Paul Moore, Chicago, 848
Mississippi Valley Medical Society, awards, 848; 850
National Order "Carlos Finlay" to Dr. L. E. Chapman, 1463
Navy's Meritorious Public Service Citation to Dr. Murray, 2092
Parker (Morris L.) award, Ill., 169
Radiological Society of North America, gold medal, 2096
Ross Award for Pediatric Research, 1717
Sabin (Florence R.) award, 1975
Schering awards, student wins second consecutive first prize, 1843
Schmiedeberg Plakette of German Pharmacological Society, N. Y., 1284
Shroder (William J.) Memorial awards, 1719
silver robot award for medical film to Drs. Hans von Leden and Paul Moore, Chicago, 848
Snow (William Freeman) awards by American Social Hygiene Association, 1978
Snyder (Lillian K.) award of Philadelphia Allergy Society, 264
State U. of New York College of Medicine, Alumni Achievement medal, 263
Tennessee State Medical Association, "outstanding general practitioner of year," 1160
Tillyer Medal of Optical Society of America, 1462
U. of Minnesota, Phi Beta Pi's "Man of Year," 1462
U. of Richmond's Golden Legion Certificate of Merit, 707
U. of South Dakota Medical School, distinguished service award, 264
U. of Toronto, honorary LL.D. member of Medical Alumni Association, 1716
Van Meter Prize award, 852
Wellcome (Sir Henry) award of Association of Military Surgeons, 1847
Ylppö (Arvo) medal in pediatrics in Finland to Dr. C. A. Smith, Mass., 1462
PROBENECID
penicillin with, mucocutaneous allergic reactions, [Ström] 1510—ab
PROCAINE HYDROCHLORIDE
anesthesia (retrosternal) for coronary insufficiency, [Ostapiuk] 628—ab
penicillin, psychic reactions, Sweden, 1624
toxicity: allergy, treatment, 111; (reply) [Shure] 1090
toxicity: reactions in dentistry, 1354
PROCTOLOGY
international congress, first, Mar del Plata, Dec., 266; 1721
PROCYCLIDINE HYDROCHLORIDE
treatment of Parkinsonism, [Zier] 1332—ab
PROFESSIONAL SECRECY: See Privileged Communications

PROFESSIONS
A. M. A. Committee on Interprofessional Relations annual report, 1006
interprofessional cooperation. [Medicine and the Law] *704
medicolegal liaison and interprofessional codes. [Medicine and the Law] *705
PROGESTERONE
treatment of toxemia of pregnancy during symptomatic stage. [Dalton] 2013—ab
PROMAZINE HYDROCHLORIDE
toxicity: blood dyscrasia. (Council report) *685
toxicity: convulsant action. [Fazekas & others] *1241
treatment of mental syndromes, Canada, 1619
treatment of neuropsychiatric disturbances in children. [Vergani] 890—ab
PROMETHAZINE HYDROCHLORIDE, N. F.
treatment plus chlorpromazine and pethidine in eclampsia. [Sheares] 1336—ab
PROPASA: See Aminosalicylic Acid
PROPRIORECEPTIVE SYSTEM
disorders, differential diagnosis of dizziness. [Hoople] *1943
PROPOXYPHENE HYDROCHLORIDE: See Dextro Propoxyphene Hydrochloride
PROSTATE
cancer, Brazil, 1070
cancer, early: causes of delay in performing surgery. [Hodges & others] *1905
cancer, transrectal needle biopsy in diagnosis. [Emanuel] 1204—ab
radiogold in, Canada, 1732
renal function in prostatism. [Olbrich] 1205—ab
tumors, adenocarcinoma, (medullary type). [Weller] 893—ab
urethra, dilatation, Finland, 1985
PROSTATECTOMY
simple perineal, results. [Turner] 891—ab
PROSTATITIS
acute hemorrhagic cystitis with pleuropneumonia-like organisms related to. [Berg] 302—ab
PROSTHESIS
hip, transfixion. [Lippmann] 1196—ab
PROSTIGMINE: See Neostigmine
PROSTITUTION
committee to consider law and practice, United Kingdom, 1175
in Japan, law closing houses to control venereal disease, 1072
PROTEIN
acute-phase, in rheumatic fever. [Rahman] 738—ab
C-Reactive: See C-Reactive Protein
high, high-fat, low-carbohydrate diet for obesity. [Thorpe] *1361
hydrolysates, nutrition in surgery, 1830—E
withdrawal, liver coma in relation to. [Summerskill] 878—ab
PROTHROMBIN: See Blood prothrombin
PSEUDOCROUP, Sweden, 1302
PSEUDOMONAS
aeruginosa infections, treatment, 1770
PSITTACOSIS
transmission, isolate parakeets to prevent: 113
transmitted from turkeys. [Graber] 1752—ab
PSORIASIS
treatment, garlic extract: 117
PSYCHE
behavior of infants kept in nursery. [Bertoye] 1700—ab
PSYCHIATRISTS
local hospitals and, in mental health, 1961
role in rehabilitation. [Bracelandl *211
PSYCHIATRY
aspects of care of severely injured patient. [Kottke] *1930
biological, research award in, 1286
infant, drug therapy in, Peru, 1474
management of somatic complications in patients. [Meislin] *1107
program, grants to U. of North Carolina, 2095
Santa Clara-Monterey Counties Psychiatric Society founded, Calif., 72
PSYCHOLOGY
evaluation and management of brain-damaged patient. [Tobis & others] *2035
painless labor by psychoprophylactic method. [Chen] 406—ab
PSYCHONEUROSES
false diagnosis of hyperthyroidism. [Jackson] *1533
treatment in children, promazine. [Vergani] 890—ab
PSYCHOPHARMACOLOGY SERVICE CENTER
established by National Institute of Mental Health, 1611
PSYCHOSIS
after isoniazid. [Waterstradt] 1333—ab
chronic, with aggressive behavior, stabilizing effect of occupational therapy. [Robin] 1332—ab
complicating prednisone and prednisolone therapy in allergy. [Bukantz & Aubuchon] *1256
group, from girl with schizophrenia, Portugal, 1991
manic-depressive, chlorpromazine for, Peru, 87
PSYCHOSIS—Continued
treatment, chlorpromazine or reserpine, breast changes after. [Robinson] 2130—ab
treatment, chlorpromazine, side-effects. [Stousland] 1881—ab
PSYCHOSOMATIC DISEASE
aspects of allergy in childhood. [Rapaport] *812
in pilot trainees. [Phillips] 1880—ab
PUBLIC HEALTH: See Health, public
PUBLIC OPINION
patient opinion on nursing care, 1978
PUBLIC RELATIONS
A. M. A. department, annual report, 990
Institute, A. M. A., report, (photo) 1057
PUBLIC WELFARE
distribution of foods, United Kingdom, 724
PUERPERIUM
breast abscess problem in. [Sarason] 1335—ab
complications: idiopathic myocardial failure. [Meadows] 406—ab
complications: obstetrician's role in mental disorders. [White & others] *138
complications: pressor phenomenon. [Finnerty & others] *778
epidemiology of staphylococcal puerperal mastitis. [Wysham] 1747—ab
estradiol valerate to inhibit lactation and relieve breast engorgement. [Rosenblum] 1333—ab
hemorrhage in, anterior pituitary insufficiency after. [Aarskog] 1881—ab
PULMONARY VALVE
stenosis, congenital, direct vision surgery during hypothermia. [Derra] 290—ab
stenosis, transposition of aorta and pulmonary artery with. [Cleland] 1337—ab
stenosis with intact ventricular septum, open valvuloplasty for. [Blount] 187—ab
PULSE
absence in both upper extremities due to aortic arch anomaly. [Azevedo] 1315—ab
obliterative brachiocephalic arteritis: pulseless disease of Takayasu. [Gibbons] 628—ab
PUMP: See Oxygenator Pump
PUPILS (eye)
familial persistent pupillary membranes. [Cassady] 2019—ab
PYELONEPHRITIS
early infantile, vs. hypogenesis: pathogenesis and sequelae of unilateral dwarf kidneys. [Zollinger] 1639—ab
PYLORUS
stenosis, hypertrophic, congenital, 707 cases. [Benson] 2120—ab
stenosis, infantile, incidence. [Laron] 1338—ab
PYODERMA
neonatorum, staphylococcal, epidemiology. [Wysham] 1747—ab
PYORRHEA: See Periodontal Disease
PYRAZINAMIDE
treatment of tuberculosis of lung. [Reale] 1316—ab
PYRIDOSTIGMINE BROMIDE
multiple-dose tablets for myasthenia gravis. [Schwab & others] *671
PYRIMETHAMINE
treatment of toxoplasmosis in children. [Käser] 891—ab
PYRIZIDIN: See Isoniazid

Q

QUACKERY
A. M. A. Bureau of Investigation, annual report, 1004
Bimini "fat descubierto": is "pega palo" the answer? [Bureau of Investigation] 695
publicized Dr. Bosss' treatment for amyotrophic lateral sclerosis discounted, 355
QUARANTINE
for infectious hepatitis? 640
QUARTERLY CUMULATIVE INDEX MEDICUS: See American Medical Association
QUELICIN: See Succinylcholine
QUINACRINE
treatment of bronchial asthma, Norway, 2106
QUINIDINE
atrial fibrillation regularized by. [Riss] 285—ab
urea hydrochloride with, for persistent pain after hernia repair. (reply) [Watson] 642
vs. rapid digitalization for paroxysmal ventricular tachycardia, 2029
QUINOLINE: See Chloroquine
QUINONE: See Ethylenecimine Quinone

R

R1 VIRUSES: See Adenovirus
RABIES
in animals, decrease, N. Y., 1603
man contracting from man. (guest editorial) [Meyer] 158—E
prophylaxis in man. [Habel] 1759—ab
vaccine (duck-embryo), effectiveness, 640
vaccine for melanoblastoma, 2033
RADIATION
dermatitis, value of troformone in. [Lelièvre] 760—ab
RADIATION—Continued
exposure and mass x-ray screening for tuberculosis, 908
exposure during dental examination, 639
from luminous paint on bedroom slippers? 1518
lesions, pancreatic enzymes for. [Bacchi] 898—ab
public health aspects, Dr. Morgan, USPHS consultant on, 1611
therapy before surgery in melanoma, Austria, 85
therapy, dermatological, in nuclear age. [Crossland] *647
therapy for endometriosis, value. [Brosset] 192—ab
therapy for skin disease, cancer after, United Kingdom, 89
therapy for tumors, Austria, 85
therapy, leukemia after, Norway, 870
therapy plus TEM in retinoblastoma. [Reese] 106—ab
therapy, preoperatively, for fundal cancer, 2140
therapy, value in ankylosing spondylitis. [Howard] 1758—ab
therapy with chemotherapy, intravenous infusion of bone marrow in patients receiving. [Thomas] 2130—ab
RADIO
amateur operators, "CQ for M. D.'s." [Leisure Corner] 1308; (reply) [Blake] 2220—C
in health education field, annual report on, 1047
national conference on "use in health field," 56; 1056
transcriptions from A. M. A. on winter fun, 1832
RADIOACTIVE: See also Atomic Bomb; Atomic Energy; and under individual chemical elements as Gold
contamination of milk, United Kingdom, 1858
counter, total body, 379
isotope technique to determine cardiac output for diagnosis and control of heart disease, 379
isotopes in differential diagnosis of anemia. [Hughes] 736—ab
isotopes, seminar for pathologists, 855
isotopes, short course at Oak Ridge, 1977
isotopes, third international symposium, Austria, Jan. 7-10, 1958
isotopes, training in India, 1733
RADIO-GOLD (Au^{198}) COLLOID
apparatus for intravesical administration in multiple superficial papillary bladder tumors, United Kingdom, 88
treatment of superficial malignant lesions of bladder. [Tuovinen] 307—ab
RADIOLOGY
changes in requirements for certification in. [Childs] *1545
diagnostic, hazards, United Kingdom, 873
fellowship at Donner Laboratory, Berkeley, Calif., 1975
research, Picker Foundation awards, 75; 854
RADIUM
treatment of tongue cancer. [Breed] 2025—ab
RAILROADS
concessions for cancer patients, India, 867
RAIN
water collected off asbestos shingles, danger from using, 1089
RAUDIXIN: Rauloydin; Raupina; Raurine; Rauserpa; Rauwiloid; See Rauwolfia serpentina
RAUWOLFIA SERPENTINA (alseroxylon; rauwolfia; reserpine)
effect on blood pressure in essential hypertension. [Sheldon] 1753—ab
effect on stomach acidity, India, 868
effects of oral and intramuscular reserpine in thyrotoxicosis. [Canary] 2126—ab
hypotensive effect of new reserpine preparation. [Bardelli] 1643—ab
new hypotensive root factor, United Kingdom, 1735
toxicity: "Parkinsonism," protection against. [Rashkis] 754—ab
treatment, breast changes in male and female with. [Robinson] 2130—ab
treatment of pregnancy toxemia. [Rogers] 887—ab
use as tranquilizer, Peru, 1473
RAYNAUD'S DISEASE
in primary pulmonary hypertension. [Smith & Kroop] *1245
RAZORS
electric, sterilization, 639
READ, (Sir) CHARLES DAVID (1902-1957)
president of Royal College of Obstetricians and Gynecologists, death of, 619; 1075
READING
epilepsy. [Stevens] 1331—ab
REAZIDE: See Cyanoacetic Acid Hydrazide
RECTOCELE
cystocele and uterine prolapse with, surgical procedure for, 1355

V 16
1957

RECTUM
cancer, operability of, United Kingdom, 89
cancer, radical surgery for, Belgium, 1297
cancer recurrence after anterior resection, relation to length of normal mucosa excised distal to lesion, [Lofgren] 401—ab
megarectum, Brazil, 719
polyps, grasping hot cautery electrode to destroy, [Blaisdell] *1392
surgery, Belgium, 1297
tumors, melanoma, malignant, [Cristiani] 883—ab
REFLEX
pediatric contributions to neurology, [Peterman] *2161
vomiting after fatty meal, 421
REFLUX
hepato-jugular, in diagnosis and treatment of congestive heart failure, (Illustrated Film Review) [Bryant] *281
hepatojugular test, apparatus to control pressure and force over hepatic area, [Burch] *1274
REGISTRY
for rheumatic fever and glomerulonephritis, [Saslaw] *1129
REHABILITATION
after industrial injury, evaluation of capability, [Yamshon] *934
bootstraps for forgotten millions, advances in, (Medicine at Work) [Golin] *1145
cardiac, questionnaire survey, (medical directors in industry) [Lee & others] *787; (general practitioners) [Williams & others] *791
department of Mountainside hospital expands, N. J., 1602
facial, after radical parotid-gland surgery, [Conley] 895—ab
International projects, World Rehabilitation Fund sponsoring, 853
of brain-damaged patient, [Tobis & others] *2035
of mental illness, neuropharmacological agents in, [Ferguson] *1677
of paraplegics, VA pamphlet, 173
of residual pharyngeal disability after poliomyelitis, [Rosma] *216
of sequels of acute poliomyelitis by intra-arterial growth hormone, [Henríquez] 756—ab
psychiatrist's role in, [Braceland] *211
role in rheumatic heart disease, [Newman] *1547
services, (Council article) [Rusk & Dacso] *260
Society for Rehabilitation of Facially Disfigured, grant to N. Y. U., 1284
RENOGRAFIN
in diagnosis of intestinal obstruction, [Epstein] *44
REPRINTS
A. M. A. Council on Foods and Nutrition reports loss of New York meeting requests for, 375
REPRODUCTION: See also Fertility; Pregnancy; Sterility
physiology research grant from Planned Parenthood, 1606
RES IPSA LOQUITUR:
problem and solution, [Medicine and the Law] *700
RESCINNAMINE: See Rauwolfia serpentina
RESEARCH
A. M. A. Committee annual report, 1001
A. M. A. Grants-in-Aid, 1002
A. M. A. establishes American Medical Research Foundation, 256; 1705
Atomic Energy Commission contracts, 1609
defense of, activities of antivivisectionists, 1017
fellowships open, 1290; 1438; 1606
grants to Boston U., 707
grants to Chicago Medical School, 2206
in state and local health departments, [Hardy & Dublin] *1808
medical, USPHS traineeships, 1439
program of Navy, 1440
serendipity, and orthopedic surgery, [Compere] *2070; 2088—E
serendipity: big word in medical progress (Medicine at Work) [Golin] *2084; 2088—E
RESEARCH REVIEWS
pain, 427
RESERPINE; RESERPOID: See Rauwolfia serpentina
RESIDENTS AND RESIDENCIES
Air Force training program, 1450
annual Council report on, 1029
approved by specialties, 453; 459; 490; (approved training programs) 560; 602—E
draft status of residents, 1442
foreign residents in U. S., 852; [McCormack & Feraru] *1388
"Guide Book for Residency Programs in General Surgery," available soon, 1964
medicine and surgery residencies available in Saskatchewan, 2208
RESIDENTS AND RESIDENCIES—Continued
military program, 1445
Naval training programs, 1448
number, Oct. 5, p. 453; 459; 490; 560; 602—E
pediatric fellowships, 854; 1286
residency deferment, Armed Forces program for, (Council report) 607
residency in allergy at Montefiore and Medical Center Hospitals, Pa., 1159
Residency Review and Conference Committees, background and development, (Council statement) 60; (value) 603—E
Residency Review Committees, annual Council report on, 1029
resident stipends (maximum) in VA, 1453
surgical training problems, [Ravdin] *1373
RESINS
azure A, Segal's tubeless gastric analysis with, [Fentress & Sandweiss] *21
RESOCHIN: See Chloroquine
RESPIRATION
arrest after intraperitoneal neomycin, [Webber] 1643—ab
"Biot's meningitic" breathing vs. jerky and irregular breathing, 1568—E
breathless coal workers, [Martin] 636—ab
cardiorespiratory syndrome of obesity, [Lillington] 1184—ab
Center at U. of Wisconsin activated, 1845
complications, hazard of immediate postoperative period, [Dripps] *795
determination of vital capacity and maximal breathing capacity, [Worton & Bedell] *1652
in-flight emergency ventilation during jet pilot training, [Balke] 905—ab
in patients with congenital heart disease, [Gamalero] 1201—ab
intermittent positive pressure, for salicylate intoxication, [Freier] 303—ab
neostigmine for apnea after neomycin, [Middleton & others] *2186
pulmonary function, India, 1986
rate, routine measurement; expensive tribute to tradition, [Kory] *448
RESPIRATORS
poliomyelitis patients in, acid-base balance of, [Brocese] 190—ab
RESPIRATORY TRACT
Disease (APC): See Adenovirus
disease, fellowships available, 854
disease, fog as therapeutic agent, [Tovell] 417—ab
disease in infancy, acute, [Taylor] 194—ab
infections, acute, in children, benzathine penicillin G alone and with procaine penicillin for, [Githens] 1085—ab
origin of postoperative hypotension, [Barbour & Little] *1529
RESUSCITATION
cardiac, Belgium, 1297
RETICULOENDOTHELIOSIS
non-lipid, in infants and children, [Sanford] 301—ab
RETICULOHISTOCYTOSIS
lipoid dermatoarthritis, [Warin] 1212—ab
RETINA
carotid artery occlusion, diagnosis by ophthalmodynamometry, [Wood & Toole] *1264
detached, electric shock therapy in patient with, 2030
hemorrhage into, India, 1174
hypertensive retinopathy improves after adrenal resection and sympathectomy, [Frayer] 2235—ab
RETINITIS
pigmentosa, acanthrocytosis and heredodegenerative neuromuscular disease, [Kornzweig] 1643—ab
solar: granular macular degeneration in, 1647
RETINOBLASTOMA
treatment, radiation and TEM, [Reese] 106—ab
RETIREMENT
medical, savings plan, Canada, 1731
medicine's biggest battle, taming time, (reply) [Kassel] 1488—C
preparation for, a must, (Council article) [Breckinridge] *1965
pre-retirement financing of health insurance, annual report, 1036
tax deferment for self-employed, annual report on, 988
RETROLENTAL FIBROPLASIA
in children, which has not progressed to complete blindness, [Gregory] 759—ab
RH FACTOR: See also Hemolytic Disease of Fetus and Newborn
effect of transfusion 17 years ago, 426
mental deficiency and, Brazil, 1853
third pregnancy and, induced labor, cesarean section or sterilization indicated? 425
RHEUMATIC FEVER
active, causes fever in valvular heart disease, [Ross & others] *1
acute-phase protein in, [Rahman] 738—ab
acute, streptococcal infections and recurrences of, [Wood] 2016—ab
acute, United Kingdom, 1737
RHEUMATIC FEVER—Continued
Cardiac Complications: See Endocarditis; Heart disease (rheumatic); Heart inflammation
case registry for, [Saslaw] *1129
diagnosis, importance of antistreptolysin in, [Bertont] 1187—ab
histamine inactivation power of blood serum in, [Parrot] 415—ab
prevent recurrence with oral penicillin, [Dowd] 194—ab
prophylaxis, [Faber] 1185—ab
prophylaxis in presence of penicillin allergy, 423
prophylaxis, penicillin, blood levels of various preparations in, [Mozzilonacci] 1085—ab
prophylaxis, penicillin, duration, 909
RHEUMATISM
Arthritis and Rheumatism, new Journal, 1162
fight aided, United Kingdom, 1857
research prizes in, Canada, 720
subcutaneous rheumatic nodules without other rheumatic pathology, 1516
treatment, chloroquine, (Canada) 721; [Bagnall] 1888—ab
RHINITIS
vasomotor, daily nose douche after submucous electrocoagulation and clipping of inferior turbinates for, 124
RHINOPHARYNX: See Nasopharynx
RIBOFLAVIN
metabolism during menstrual cycle, India, 1173
RIBS
cervical, and thrombosis of subclavian artery, [Shenkin] *335
RICKETS
prevention, national policies for, [Lightwood] 306—ab
sequel of ureterosigmoidostomy, [Tobler] 1883—ab
RILEY-DAY SYNDROME: See Dysautonomia
RIMIFON: See Isoniazid
ROENTGEN RAYS
Chest x-rays: See Thorax, chest x-rays
contrast medium, fatal intra-abdominal hemorrhage simulating reaction to, (Counts & others] *1134
dental examination, radiation exposure from, 639
department, report of Joint Commission on Accreditation of Hospitals on, 160
diagnosis of Friedlander's pneumonia possible? 1896
findings in hyaline membrane disease in infants weighing over 2,000 grams, [Ellis] 2024—ab
fluoroscopy to fit shoes, A. M. A. recommends discontinuance, (Council report) 1705
follow-up of mitral commissurotomy patients, [McAfee] 1757—ab
gastrointestinal findings due to hexamethonium, [Ettman] 415—ab
manifestations of pulmonary arteriovenous fistula, [Steinberg] 1758—ab
nonabsorbable water-soluble contrast mediums in diagnosis of intestinal obstruction, [Epstein] *44
recognize and differentiate parosteal osteogenic sarcoma by, [Stevens] 903—ab
surveys, follow-up in suspected tuberculosis, 422
technicians, schools for, 1457
2-million-volt unit at Baylor Hospital, Texas, 2095
visualization of intervertebral disk, [Wise] 902—ab
visualization of intracardiac structures, safety of intravascular carbon dioxide, [Durant] 2024—ab
ROENTGEN THERAPY
as possible cause of shoulder-hand syndrome, [Gagliardi] 1349—ab
ROENTGENOGRAMS: See "Malpractice" under Medicolegal Abstracts at end of letter M
ROLICTON: See Amisometradine
ROMICIL: See Oleandomycin
ROUNDWORMS: See Ascariasis; Larva migrans; Strongyloidiasis
ROXINIL: Roxinoid: See Rauwolfia serpentina
ROYAL COLLEGE
of Obstetricians and Gynecologists, president, Sir Charles Read died, 619
RUBELLA
aseptic meningitis with rubelliform rash, Canada, 623; [Laforest] 888—ab
during first few days of pregnancy, interrupt pregnancy for? 1557
maternal, congenital unilateral multicystic kidney in infant associated with, [Lipton] 398—ab
maternal, frequency of defects in infants after, [Greenberg & others] *675; 688—E
RURAL COMMUNITIES
abacterial epidemic meningitis in, [Brockhaus] 1330—ab
Council on Rural Health annual report, 995

RURAL COMMUNITIES—Continued
first physician refunded medical school tuition under doctor for community program, 352—E; 355
Health Conference, March 6-8, 2203
health study conference, A. M. A. sponsors, 57
RUSSIA
medicine in, United Kingdom, 873
physician's family requirements for British Embassy in Moscow, 390

S

STH: See Somatotropin
SACCHARIN
effects on eye, 1770
SAFETY
National Safety Congress, A. M. A. co-sponsors session on vision in industry, 354
ST. LOUIS UNIVERSITY
continuing education program at, 2208
SALICYLATES
toxicity, intermittent positive pressure respiration for, [Freier] 303—ab
urinary glucuronide effect on solubility of calcium phosphate and stone formation after usine, [Vermeulen] 302—ab
SALICYLAZOSULFAPYRIDINE
in nonsurgical management of regional enteritis, [Barger] *2015
SALICYLIC ACID
gastric hemorrhage due to, (Denmark) 721; [Mellemgaard] 1754—ab
SALIVA
erythema and salivation after appetite stimulation, 313
SALIZID: See Isonicotinic Acid Hydrazides, o-hydroxybenzal
SALK VACCINE: See Poliomyelitis
SALMONELLA
in fertilizers, United Kingdom, 872
osteomyelitis and abnormal hemoglobin disease, [Silver] 2015—ab
thompson gastroenteritis, [Wright] 1761—ab
SALMONELLOSIS
clinical manifestation, [Saphra] 419—ab
in children, chloramphenicol-tetracycline for, [Streifeld] 1507—ab
in Massachusetts, [MacCready] 418—ab
SALT: See also Sodium chloride
Free diet: See also under Sodium
free diet, residual salt after salting fresh meat to remove blood, (replies) [Trimble; and original consultant] 120
sea salt as source of fluoride, toxicity, 1769
SANATORIUM: See under Tuberculosis
SANDOSTENE
treatment of various dermatoses, [Baker] 1203—ab
SANDRIL: See Rauwolfia serpentina
SANITATION
of hairdressing salons, Norway, 1301
SARCOIDOSIS
hilar lymph nodes in, prognosis, [Smellie] 1317—ab
hypercalcemia and, cortisone for, [Koster] 1321—ab
myocardial, [Peacock] 1212—ab
V. A. study, 77
SARCOMA
cardiac, primary, [Faber] 629—ab; (reticulum cell) [Kaufman] 2132—ab
etiology in rats, tobacco tars from cigarette filters, United Kingdom, 89
osteogenic, [Coventry] 1195—ab
parosteal osteogenic, x-ray recognition and differentiation, [Stevens] 903—ab
soft-tissue, of extremities, spread along peripheral nerve trunks, [Barber] 746—ab
soft tissue, of shoulder, 36 years' survival, [Charache] 1504—ab
synovial, with pulmonary and pleural metastases, (Diagnostic Problems) [Kushner & Szanto] *2193
treatment, ethyleneimine quinone, [Di Pietro] 1343—ab
SATURNISM: See Lead poisoning
SCALE
chair, portable, for hospital use, [Silverman & Ikefugi] *826
SCALENE LYMPH NODE
biopsy in diagnosing chest diseases, [Schiff] 1501—ab
SCAR: See Cicatrix
SCHISTOSOMIASIS
hepatosplenic, Brazil, 1853
japonica, acute colonic obstruction in, 14 of 40 cases with carcinoma, [Ch'en] 1638—ab
museum on tour, United Kingdom, 1302
SCHIZOPHRENIC REACTIONS
chronic, chlorpromazine for, Peru, 87
group psychosis from girl with, Portugal, 1991
treatment, azacyclonol hydrochloride, [Odland] *333; (reply) [Zeisler] 1739—C
SCHOLARSHIPS
for Cuban physician to study internal medicine at Wayne State U., 377
SCHOLARSHIPS—Continued
loan funds and, 1409
Mead Johnson Awards, 1721
National Science Foundation, 1409
neuromuscular, from Sister Kenny Foundation, 852
SCHOOLS: See also Medicolegal Abstracts at end of letter M
hazard of tuberculous clerk employed in, 312
health services for school-age child: new approach, [Jacobziner] *1669
health symposium, Kansas, 371
National Conference on Physicians and, "Decade of Progress in Fitness," 54—E; 57
paramedical, approved, 1453
science teachers, research program, 1606
teachers, homicidal, Japan, 625
tuberculosis outbreak from food handler, [Moss] 1635—ab
SCHOOLS, MEDICAL: See also specific schools
accreditation, annual report, 1026
activities, costs, 1459—E
affiliation, internships by, 455; 482
Alumni: See Gradua es
aviation medicine school at Bangalore, India, 180
Dr. Richards goes to Thailand to help set up, Neb. 2206
faculty members' draft status, 1442
faculty, private practice by, study problems of, annual report on, 1044
Guy's, Ministry of Health approved rebuilding, United Kingdom, 390
looking ahead, development and new schools, 1460—E
School of Aviation Medicine, Randolph Air Force Base, Texas, (Dr. Lamb appointed chief of internal medicine) 77; (all USAF aviation medicine training given at) 1722
Statistics on (medical education number), Nov. 16, page 1393
tuition, first physician refunded, under "doctor for community" program, 352—E; 355
U. S., and British compared, 1176
U. of El Salvador, teaching program in basic sciences, 376
U of. Puerto Rico relocated, 851
SCIATICA
posterior compression causes, [Teneff] 1323—ab
surgical treatment, Norway, 870; 2106
SCIENCE
clinical, advanced degree programs in, 1419
fairs, national, A. M. A. annual report on, 992
medical, changing dimensions and their implication in medical education, 1394
teachers, research program, 1606
USPHS training grants, 1439
USPHS visiting scientist program, 1439
SCIENTIFIC TESTS: See "Evidence" under Medicolegal Abstracts at end of letter M
SCLERODERMA
renal lesions in, [Carpenti] 741—ab
treatment, 2032
SCLEROSIS
amyotrophic lateral, 765
amyotrophic lateral, in boiler cleaner, industrial disease aspect, 2141
amyotrophic lateral, publicized treatment discounted, 355
multiple, early symptoms, [Imes] 756—ab
SCOPOLAMINE
pteanesthetic use in glaucoma, [Schwartz & others] *1141
SCORBUTOL
s.lygs, emeline hydrochloride for, United Kingdom, 714
SEA
salt as source of fluoride, toxicity, 1769
SECRETIN
test to diagnose pancreatic disease, [Dreiling] 2118—ab
SEDATIVES AND HYPNOTICS
ethchlorvynol for daytime use, N. N. D., 157
SEED
disinfectant, relation between use of Ceresan M and peptic ulcer? 1769
SEGALE'S Tubeless Gastric Analysis: See Azure A Resin
SEMINIFEROUS TUBULES
dysgenesis, sex chromatin pattern in; relation to hermaphroditism and Klinefelter's syndrome, [Grumbach] 900—ab
SEMINOMA
testicular, bilateral, with bilateral cryptorchidism, [Summer] 1641—ab
SERENDIPITY
big word in medical progress, (Medicine at Work) [Golin] *2084; 2088—E
research, and orthopedic surgery, [Compere] *2070; 2088—E
SEROMYCIN: See Cycloserine
SEROTONIN (5-hydroxytryptamine)
determination in carcinoid, [Pernow] 879—ab
SERPASIL; Serpiloid; Serpina: See Rauwolfia serpentina
SERUM: See also Biologic Products; and subheads under Blood
SERUM—Continued
Antitetanic: See Tetanus
blood, histamine inactivation power in rheumatic fever, [Parrot] 415—ab
Hepatitis: See Hepatitis, Infectious
SEWAGE
infected sea water, United Kingdom, 391
SEX
activity after gastrectomy, France, 1985
behavior in teenagers, pilot study, Mo., 1158
chromatin in choriocarcinoma and skin cancer, [Oosterhuis] 414—ab
chromatin in seminiferous tubule dysgenesis and other testicular disorders, relation to true hermaphrodism and to Klinefelter's syndrome, [Grumbach] 900—ab
chromatin, nuclear, in cryptorchid testes, [Sohval] 2023—ab
distribution of students and graduates by, in U. S. and Canada, 1956-1957, 1422
effect on susceptibility and clinical manifestations in poliomyelitis, [Weinstein] 885—ab
Hormones: See Androgens; Estrogens; Gonadotropins; Hormones
inversion, genetic: developmental and hormonal aspects, [Witschi] 900—ab
nuclear, frequency and testicular morphology in Klinefelter's syndrome, [Ferguson-Smith] 2237—ab
pamphlets, annual report on, 1016
Perversion: See Homosexuality
sexology of paraplegic male, [Zeitlin] 1641—ab
urge, sublimation possible medically? 203
SHEEHAN'S Syndrome: See under Pituitary
SHELLFISH
regulations, United Kingdom, 389
SHIPS
building industry, deafness in, Finland, 86
military sea transport, Asian influenza epidemic aboard, [Schreiber] *1683
SHOCK
adrenal cortical steroids for, [Andersen] 1887—ab
electric, accidental, atrial fibrillation due to, [Wehrmacher] *549
in newborn, transplacental hemorrhage from fetus to mother causes, [Shiller] 1199—ab
postoperative collapse due to adrenal insufficiency after cortisone, [Slaney] 749—ab
surgical, acute adrenal insufficiency in, [Adams & Siderius] *41
treatment of collapse due to meningococcus infection, [Cassidy] 637—ab
SHOES
A. M. A. advocates discontinuing fluoroscope fitting, (Council report) 1705
dermatitis from, differential diagnosis of cause, 641
luminous paint on slippers and radiation, 1518
sterilization at skating rink, 116; (replies) [Leonards; and original consultant] 2246
SHOULDER
hand syndrome after myocardial infarction, prognosis, [Edelken] 1183—ab
hand syndrome, historical review, [Rosen] 1634—ab
hand syndrome, x-ray therapy as possible cause, [Gagliardi] 1349—ab
painful syndrome, atypical, [Brusadelli] 1186—ab
tumors, soft tissue sarcoma, 36 years' survival, [Charache] 1504—ab
SIGMOID: See under Colon
SILK
aller.y, severe reactions to biologicals caused by, [Brown & Coleman] *2178
SILVER
carbonate to study histopathology of psychomotor epilepsy, [Scharenberg] 103—ab
SINGING, choral, [Leisure Corner] 2221
SINUSITIS, NASAL
modern treatment, [Bryan] 894—ab
SJOGREN'S SYNDROME
[Szanto] 1870—ab
SKATING RINK
sterilization of shoes at, 116; (replies) [Leonards; and original consultant] 2246
SKIN
allergic reactions after probenecid-penicillin, [Strom] 1510—ab
cancer, epidermoid carcinoma in situ, Peru, 1622
cancer, sex chromatin in, [Oosterhuis] 414—ab
disease, allergic, [Rostenberg] *1118
Disease (Industrial): See Industrial Dermatoses
disease, new corticosteroid for, [Rein & others] *1821
disease: oral, topical and parenteral antipruritic treatment, [Baker] 1203—ab
disease, prednisone and prednisolone topically for, [Frolow] 1509—ab
disease, radiation therapy for, cancer after, United Kingdom, 89
disease, radiation therapy in nuclear age, appraisal, [Crossland] *647
disease, reactions to chloroquine during treatment, [Goldman] 2018—ab
homograft problem, [Cannon] 1506—ab

V 16
1957

SKIN—Continued
homografts, postmortem, in extensive burns, [Davis] 402—ab
Inflammation: See Dermatitis; Dermatomyositis; Neurodermatitis
lesion, periorbital; diagnosis, treatment, 312
lesions in leprosy, India, 1987
percutaneous tracheotomy, [Shelden & others] *2068
rash, Murray Valley, [Wilson] 1870—ab; [Fuller] 1871—ab
rash, rubelliform, aseptic meningitis with, Canada, 623
subcutaneous rheumatic nodules without other rheumatic pathology, 1516
subcutaneous tissue, bromsulphalein toxicity in, 910
symposium on human integument, A. M. A. and Society for Investigative Dermatology sponsor, 1705
tanning, bergamot oil or lime juice to increase? 909
tests for food allergy in children after prolonged corticosteroids for asthma, (reply) [Engelsher] 120
SLEEP
disorders, treatment of insomnia, 913
eyelids fail to close during, 764
Therapy: See Hibernation, Artificial
SLING
arm, electromechanical, [Hoerner & others] *150
SLIPPERS: See Shoes
SMALLPOX
immunization, Stevens-Johnson syndrome after, [Boquilen] 414—ab
spread by international travelers, WHO statistics, 1720
SMEARS (cytologic): See Cytology
SMITH, KLINE AND FRENCH LABORATORIES
television project, Council annual report on, 994
SMOG
survey, state, Calif., 2205
irritants, possible, effect of, [Sim & Pattle] *1908
SMOKERS; SMOKING: See Tobacco
SNAKES
bite, experimental viper venom poisoning, India, 868
venoms, North American, survey of allergy to, [Parrish] 2020—ab
viper venom, isolate various fractions, Israel, 722
SOCIAL SECURITY
amendments, Committee annual report on, 987
A. M. A. task force to study hospitalization of aged financed by, 841; 1283; (President's page) 1701
disability program, A. M. A. report on, 354
for physicians, covered in new York, [Brussel] 2220—C
for physician, study hazards of, (President's Page) 353; (President replies to A. M. A. member opposing A. M. A. stand on) 2199
for physicians, (survivors and disability insurance program) *883; 899—E; (position of medical profession on) *834; (survivorship benefits) *952
free hospital care for beneficiaries, big parade of 1958, 1568—E
SOCIAL SERVICES, United Kingdom, 2218
SOCIALISM
cost of welfare state, United Kingdom, 871
SOCIETIES, MEDICAL: See also list of Societies at end of letter M
Amarillo Society of Internal Medicine formed, Texas, 1160
American Medical Writers Association, Michigan Chapter organized, 2093
Boone County (Mo.), co-sponsors symposium on nutrition and pregnancy, 49; 57—E; 604—E
complaint against physician, basis for libel action, [Medicine and the Law] *259
county, civil defense conference, 841; (program) 842, (report on) 1012
county, 1957 survey, booklet available from A. M. A., 1962
Essex County (N. J.) Pathological and Anatomical Society, 50th anniversary, 262
executives roster, annual report, 1947
first Latin-American medical women's association organized, Peru, 87
Grievance Committee: See Medicolegal Abstracts at end of letter M
local responsibility in judicial matters affecting own members, 839
membership, A. M. A. Judicial Council Session on alleged discrimination against, 839
membership for physicians not in private practice, (reply) [Salkin] 1994—C
National Tay-Sachs Association, Inc., established, 2097
national voluntary health associations, brochure on objectives, organization, and financing, Canada, 1619
Northern Virginia Pediatric Society organized, 1605
SOCIETIES, MEDICAL—Continued
Pennsylvania Association of Blood Banks undergoing organization, 1604
regional group of dermatologists to be formed, Ark., 261
related activities of organized medicine, [Medicine and the Law] *702
report to, for control of Asian influenza, 689—E; (Special Committee report) 691
responsibility in federal medical services, 1037
Santa Clara-Monterey Counties (Calif.) Psychiatric Society founded, 72
state committees on industrial health, joint conference, 1007
state legislative key man organization, 987
state, 3rd annual conference on mental health representatives, 994
Texas Physical Medicine and Rehabilitation Society, first meeting, 1160
SOCIETY for Investigative Dermatology and A. M. A. sponsor symposium on human integument, 1705
SODIUM
Acetrizoate: See Acetrizoate, Sodium
bicarbonate intoxication, United Kingdom, 871
Chloride: See also Salt
chloride as contraceptive harmful? 202
diuresis from amphenone in cirrhosis and ascites, [Wolfe] 1644—ab
hydroxide, eye damage from, 1896
Liothyronine: See Liothyronine
restricted diets available through National Research Council, 256
SOLDERING
fumes, exposure of eyes to, 764
SOLOX
intoxication, [Hammack] *24
SOMATIC
complications in psychiatric patients, management of, [Meislin] *1107
SOMATOTROPIN (STH; somatotropic hormone)
treatment in rehabilitation of acute poliomyelitis sequels, [Henriquez] 756—ab
SOYBEANS
products, milk substitutes, [Fries] *1542
SPACE MEDICINE
health in caverns, (reply) [Benford] 91—C
SPARINE: See Promazine
SPASM
muscle, zoxazolamine and/or chlorpromazine for, [Gibson & others] *18
tetanic, chlorpromazine for, [Ricci] 2128—ab
SPECIALTIES
approved residencies and fellowships by, 453; 459; 490; (approved training programs) 560; 602—E
background and development of Boards, Residency Review and Conference Committees, (Council statement) 60
graduate training for naval officers in, 1149
military medicine, [Lee] *805
number of residencies by, 459
postgraduate courses by category and type of practice, 1432
requirements for certification, 453; 573
service, "Doctor-Draft" legislation provides for 1442
SPECTROGRAPHY
study of trace elements in cancerous and noncancerous tissues, [Tietz & others] *2187
SPEECH
fellowships at Northwestern U., 618
prosodic grunt, Norway, 387
SPERMATOGENESIS
antituberculous drugs depress spermatogenesis? 909
decreased after severe electric shock, etiologic relation? 422
SPHINCTER MUSCLES
anal, abiatrophy, in woman 67, treatment, 1897
Oddi's, drugs acting on, Brazil, 719
rectal, incontinence, pouch or bag for? 766
SPINAL CORD
injuries, surgical, severe, care of patient, [White] *1924
injuries, zoxazolamine and/or chlorpromazine for muscle spasm after, [Gibson & others] *18
neoplastic disease of extradural space, [Mullan] 399—ab
sensory neurons, lesions in acute anterior poliomyelitis, [Nicolau] 885—ab
white matter lesions in acute poliomyelitis, [Feigin] 404—ab
SPINAL FLUID: See Cerebrospinal Fluid
SPINAL PUNCTURE
lumbar, and intervertebral disk damage, 1645
SPINE
ankylosing spondylitis, (cortisone and allied substances for) [Croft] 1643—ab; (value of radiation) [Howard] 1758—ab
arthritis, radiotherapy results, Brazil, 1470
cervical vertebral spinous process, non-fusion cause occipital headache and neck pains? 1898
changes in old age, Finland, 1985
SPINE—Continued
fractures of transverse lumbar processes possible without clinical symptoms? 1648
fusion in young children, results, growth after, [Hallock] 745—ab
intervertebral disk damage from lumbar puncture? 1645
intervertebral disk, x-ray visualization, [Wise] 902—ab
lumbar disk surgery, routine blood transfusion during? 1221
lumbar disk syndrome, mechanical traction in, [Parsons] 1188—ab
osteofixation for lumbago-sciatica, Norway, 870
paravertebral alcohol block of lumbar sympathetic nerves, [Roedling & others] *799
puncture of vertebral body, France, 1299
surgery for low back pain and sciatica, Norway, 2106
tuberculous spondylitis, treatment, 1767
SPIRAMYCIN
tetracycline with, in vitro and antibacterial action of blood after, [Jones] 2237—ab
SPLEEN
absence, congenital, [Murphy] 1751—ab
accessory, in tail of pancreas, [Halpert] 2131—ab
ectopic tissue resembling third testicle, [Daniel] 1205—ab
forms of hepatolenticular degeneration, [Roudin] 305—ab
hepatosplenic schistosomiasis, Brazil, 1853
hypersplenism in geriatrics, [Schwartz] 397—ab
suppuration and calcification due to long standing Brucella suis infection, [Spink] 1742—ab
traumatic injuries in child 8, splenectomy for, disability after? 1356
tumors, follicular lymphoblastoma, 27 year survival, [Decker & Little] 1178—C
SPLENECTOMY
ligature of inferior mesenteric vein and gastric vein with, in portal vein hypertension, Brazil, 1853
prednisone and, for hemolytic anemia due to autoantibodies, [Cantoni] 1746—ab
SPLENOMEGALY
tropical, liver biopsy in, India, 868
SPLENOPORTOGRAPHY
percutaneous, appraisal, [DeWeese] 1872—ab
SPLINTS
finger, simple, [White] *946
hand, glove-type extension, [Modern & others] *211
SPONDYLARTHRITIS: Spondylitis; See Spine arthritis
SPOROTRICHOSIS
leptomeningitis from Sporotrichum schenckii, [Shoemaker] 1755—ab
12 cases, 2 with skeletal involvement, [Mikkelsen] 2224—ab
SPORTS: See Athletics; and under specific sports, as Golf
SPRUE
in remission, diagnosis by hepatic uptake of radioactive $Co^{60}B_{12}$, [Glass] 1870—ab
Nontropical: See Celiac Disease
SPUTUM
purulent, in chronic bronchitis and bronchiectasis, antibiotics effect on, [Douglas] 1633—ab
studies after tetracycline for chronic bronchitis and bronchiectasis, [Fox] 1208—ab
STAPHYLOCOCCUS
aureus, postoperative wound infections caused by, [Howe] 2122—ab
aureus, sepsis in surgical wounds, [Clarke] 884—ab
aureus strains, change in sensibility to various antibiotics, [D'Agata] 1887—ab
aureus strains, synergism with 12 antibiotics against, [Elliott] 1886—ab
bacteremia without endocarditis, [Schirger] 1342—ab
enteritis, acute from antibiotics, [Bassi] 398—ab
enterocolitis, [Lepley] 1876—ab
infections in general hospital, [Wysham & Kirby] **164**:1733, Aug. 17, 1957; (correction) **165**:171, Sept. 14, 1957
infections in obstetric unit; puerperal mastitis; pyoderma neonatorum, [Wysham] 1747—ab
infections, penicillin resistant, response to penicillin V, [Burn] 1753—ab
infections, vaccine prophylaxis, 911
penicillin resistance in cattle, United Kingdom, 389
pericarditis, penicillin-resistant, [Nieman] 1184—ab
pneumonopathy in early infancy due to, [Benevolo] 409—ab
STATE
largest enrollments in postgraduate courses, 1433

STATE—Continued
legislative key man organization, 987
number of internships by, 455; 456
rural health committees, conference sponsored by A. M. A., 57
STATISTICS: See also Vital Statistics
awards for study at U. of Chicago, 856
blood transfusions in U. S., Joint Blood Council survey, *1135; 1154—C
medical, interpretation of, 2139
STERILITY, SEXUAL
endometrium of sterile women, Peru, 274
treatment, cortisone, Israel, 625
treatment, sodium ilothyronine, [Morton] *1124
STERILIZATION, BACTERIAL
method for nylon sutures, 116
of electric razors, 639
of equipment, lectures on, N. J., 1158
of needles to prevent hepatitis transmission, 1895
of shoes in skating rink, 116; (replies) [Leonards; and original consultant] 2216
of spinal anesthesia ampuls, 2032
shellfish regulations, United Kingdom, 389
STERISIL: See Hexetidine
STEROIDS: See also Corticosteroid Hormones; and specific steroids as Cortisone
in breast cancer, annual report, 1062
STEVENS-JOHNSON SYNDROME
after smallpox immunization, [Boquien] 414—ab
allergic dermatosis, [Rostenberg] *1118
STILBESTROL: See Diethylstilbestrol
STILLBIRTH
due to hemolytic disease of newborn, [Walker] 1748—ab
due to oxygen deficiency in postmaturity, incidence of, [Kohl] *1859
perinatal mortality, Peru, 1989
STIPENDS: See Wages
STOKES-ADAMS Syndrome: See Heart block
STOMACH
achlorhydria, Segal's tubeless gastric analysis to determine, [Fentress & Sandweiss] *721
acid secretion after partial excision with vagotomy for duodenal ulcer, [Waddell] 1327—ab
acidity and Rauwolfia serpentina, India, 868
cancer, ethnologic aspects of ABO blood groups in, [Buckwalter & others] *327
cancer, gastrectomy extended to typical partial resection of liver infiltrated by, [Mancuso] 1191—ab
cancer, multiple, [Moertel] 899—ab
cancer of mucosa, early diagnosis, [Martin Arribas] 290—ab
cancer, risk after medical treatment for ulcer, [Doll] 2230—ab
cancer, secretory and clinical aspects of achlorhydria and atrophy as precursors, [Hitchcock] 752—ab
ectopic mucosa cause tumor? clinical significance, 117; (replies) [Berger; and original consultant] 2142
eosinophilic infiltration of, [Ferrier] 1079—ab
hemorrhage due to salicylic acid, (Denmark) 721; [Mellemgaard] 1751—ab
hemorrhage, massive, [Nissen] 1193—ab
inflammation, giant hypertrophic, Peru, 625
perforation in newborn, postoperative wound evisceration and survival, [Abramson] 2124—ab
rupture, spontaneous, in newborn infant, [Moore] 2229—ab
secretion, inhibitor, United Kingdom, 389
secretion: tubeless gastric analysis vs. plasma pepsinogen to determine, [Sievers] 1651—ab
Surgery: See also Peptic Ulcer: Stomach, cancer
surgery, acute postgastrectomy pancreatitis, [Burton] 1501—ab
surgery, infections complicating, [Saldin] 1876—ab
surgery, postgastrectomy dumping syndrome, hypnotic suggestion for, [Leonard & others] *1957
surgery, primary esophagogastrectomy for instrumental perforation of esophagus, [Blalock] 2121—ab
surgery, sexual activity after gastrectomy, France, 1985
surgery, subtotal gastrectomy, megaloblastic anemia incidence after, [DeLean] 1501—ab
tumors, glomus, [Shocket] 718—ab
tumors, problem of carcinosarcoma, [Sánchez-Lucas] 731—ab
Ulcer: See Peptic Ulcer
STRATIGRAPHY
in investigation for mitral calcification, [Rizzetto] 196—ab
STREPTOCOCCUS
endocarditis, phenoxymethyl penicillin and streptomycin for, [Walker] 2116—ab
infection, allergic mucocutaneous reactions after probenecid-penicillin in, [Ström] 1510—ab
STREPTOCOCCUS—Continued
infection and recurrences of acute rheumatic fever, [Wood] 2016—ab
infection, benzathine penicillin G to prevent, [Morris & Rammelkamp] *664
infection, muscular weakness after, 1518
infection, vaccine prophylaxis, 911
infection, vitamin C potentiate antibiotic therapy? 642
susceptibility of enterococci and hemolytic groups to 5 new antibiotics in vitro, [Jones] 414—ab
STREPTOKINASE-STREPTODORNASE
in thoracic surgery for tuberculosis of lung, [Strode] 1192—ab
STREPTOLYSIN: See Antistreptolysin
STREPTOMYCIN
Dihydro-: See Dihydrostreptomycin
pantothenate-PAS, intravenous infusion in tuberculosis, [Kuntz] 1346—ab
resistant Mycobacterium tuberculosis, Colombia, 1298
treatment plus isoniazid in laryngeal tuberculosis, [Wallner] 895—ab
treatment plus penicillin V in streptococcal endocarditis, [Walker] 2116—ab
STRESS
automobile-driving, in relation to cardiac and vascular deaths, [Mills] 1761—ab
benefit in rehabilitation and restorative services in old age, (Council article) [Rusk & Dacso] *2360
corticotropin secretion in rats under, India, 1986
false diagnosis of hyperthyroidism, [Jackson] *1533
psychobiological, rheumatoid arthritis as maladaptation to, Canada, 1619
ulcers of esophagus, perforation after thermal burns, [Derrick] 882—ab
"STRING TEST" for peptic ulcer? 1089
STRONGYLOIDIASIS
treatment, dithiazanine, effective, [Swartzwelder & others] *2063
STUDENTS—See also Medicolegal Abstracts at end of letter M
examinations and, United Kingdom, 1305
STUDENTS, MEDICAL
American concerns, first, Peru, in August, 1622
blood transfusion to, in variability, [Thomas] 2238—ab
British association of, 1301
evaluation N. Z., 2214
homage to D. A. Carrión, who proved verruga peruana and Oroya fever have same etiology, Peru, 1622
selection, United Kingdom, 1177
Statistics on, (medical education number), Nov. 16, 1957
women, enrollment, 1423
STURGE-WEBER SYNDROME
histomathodesy, [Waldwill] 1196—ab
STYRENE
toxicity in plastic manufacture, 201
SUBDURAL: See Meninges
SUBMARINE
medicine, Naval, 1419
SUCCINYLCHOLINE CHLORIDE, U. S. P.
drip in cesarean section, [Kolstad] 192—ab
SUCOSTRIN: See Succinylcholine
SUEZ campaign, medical aspects, United Kingdom, 388
SUGGESTION: See Hypnosis
SUICIDE
attempted, causes, methods, United Kingdom, 274
group psychosis from girl with schizophrenia, Portugal, 1994
SULFOBROMOPHTHALEIN SODIUM
toxicity in subcutaneous tissue, 910
SULFONAMIDES
Antidiabetic: See Sulfonylureas
metabolism modified by, Austria, 1618
sulfone combination, therapeutic effect, [Dettori] 896—ab
treatment of toxoplasmosis in childhood, [Kaser] 891—ab
SULFONES
sulfonamide combination, therapeutic effect, [Dettori] 896—ab
SULFONYLUREAS (carbutamide; tolbutamide)
allergy to insulin, indication for use of, (reply) [Engelsher] 278—C
clinical and experimental studies, [Craig] 411—ab
toxicity: hypersensitivity fatal, [Field] 412—ab
treatment of diabetes, (United Kingdom) 388; [Sugar]; (mechanism of action) [Levine] 411—ab; (India) 1622; (warns of indiscriminate use, United Kingdom) 1735; [Walker] 2020—ab; [McKendry] 2129—ab
SULFUR
dioxide gas, effect of possible smog irritants, [Sim & Pattle] *1908
SULFURIC ACID
effect of possible smog irritants, [Sim & Pattle] *1908
SUN
chlorpromazine causes reactions on exposure to, [Epstein] 1638—ab
depigmentation after exposure to, 1226
lupus erythematosus rash after exposure to, does window glass filter out ultraviolet rays? 1355
tanning, bergamot oil or lime juice to increase? 909
SUPERSONICS: See Ultrasonics
SUPRARENALS: See Adrenals
SURGERY
adrenocortical response in, [Lefemine] 1328—ab
blood loss at, continuous measurement, [Borden] 1746—ab
Canadian Journal of Surgery to be published quarterly, 1063
complications: monitor to detect and differentiate cardiac standstill, ventricular fibrillation or peripheral vascular collapse, [Simpson] 718—ab
consent to and other procedures, [Medicine and the Law] 65
convalescence, when does it end? [Moss & others] *322
department, director appointed at U. of Florida, 1063
emergency, safe transportation of newborn infants for, [Bishop] *1230
for disability helps delinquents, United Kingdom, 1857
"Guide Book for Residency Programs in General Surgery" available soon, 1964
in hemophilia, animal antihemophilic globulin and human plasma in, [Macfarlane] 1877—ab
in patient with nephrosis, 424
monocular, preanesthetic atropine and scopolamine in patients with glaucoma, [Schwartz & others] *1141
not free to American visitor, United Kingdom, 1857
nutrition in surgical patient, 1830—E
operating room temperature, 764
plastic, and fashion, United Kingdom, 1301
plastic, desiccated red corpuscles effect on cicatrization of wounds, [Giles] 1323—ab
plastic, role in management of severely injured patient, [Anderson] *1922
Postoperative: See also under specific organs, regions or operations
postoperative acute adrenal insufficiency, [Adams & Siderius] *41
postoperative atelectasis, bronchoscopy in prevention, [Brown] *947
postoperative collapse from adrenal insufficiency after cortisone, [Slaney] 749—ab
postoperative hypotension, [Barbour & Little] *1529
postoperative iced drinks, 1770
postoperative pancreatitis fatal, [Ferris] 1503—ab
postoperative period, immediate, hazards, [Dripps] *795
postoperative potassium vs. aldosterone, N. Z., 2216
postoperative staphylococcic wound infections, [Howe] 2122—ab
postoperative stimulation of intestinal motility, pantothenyl alcohol for, 763
postoperative thromboembolism, [Heinrich] 289—ab; (prophylaxis and therapy) [Wilmhöfer] 737—ab
postoperative transient aldosteronism, [Llaurado] 1323—ab
postoperative urinary infections, [Harris] 2220—C
pregnancy complications requiring, [Barter & Rovner] *317
Preoperative: See also under specific organs, regions or operations
preoperative care for cataract in diabetic, 765
preoperative diagnosis of myxoma cordis, [van Buchem] 401—ab
preoperative nitrogen mustards in cancer of digestive tract, [Maur] 750—ab
residency training problems, [Ravdin] *1373
wounds, sepsis, especially Staphylococcus aureus, [Clarke] 884—ab
wounds, staphylococcic, in general hospital, [Wysham & Kirby] **164**:1733, Aug. 17, 1957; (correction) **165**:171, Sept. 14, 1957
SUTURES
nylon, contaminants, sterilization method, 116
SWALLOWING
of foreign bodies, magnetic removal? (replies) [Blackford; and original consultant] 766
SWEAT
anhidrotic type of hereditary ectodermal dysplasia, [Bowen] 1509—ab
electrolytes, fibrocystic disease of pancreas diagnosis by, United Kingdom, 390
excessive in hormonal imbalance in woman 54 after pelvic surgery, treatment, 2031
hyperhidrosis palmaris: familial disease in Japanese, [Cloward] 289—ab
metal corrodes after handling with sweaty hands, counteract condition? 1647

V 16
1957

SWEAT—Continued
tests to evaluate paravertebral alcohol block of lumbar sympathetic nerves, [Roedling & others] *2709
SWEAT GLANDS
cancer, metastasizing, [Teloh] 892—ab
SWIMMING cramps after eating? 1090
SYMPATHECTOMY
hypertensive retinopathy improves after adrenal resection and, [Frayer] 2235—ab
of carotid sinus for myasthenia, [Yoel] 2010—ab
SYMPOSIUM
Hertzler memorial, first annual, 1063
on Fundamental Cancer Research, 12th annual, Texas, 2207
on human integument sponsored by A. M. A. and Society for Investigative Dermatology, 1705
on nutrition in pregnancy, Oct 11, (Council announcement and program) 49: 57—E; 604—E
SYNCOPE
asphyxial, in newborn, intrafunicular blood transfusion for, [Marchesoni] 888—ab
SYNERGISM
of antibiotics against Staphylococcus aureus, [Elliott] 1886—ab
SYNOVIAL MEMBRANE
sarcoma with pulmonary and pleural metastases; painful knee, drop foot and hemoptysis, (Diagnostic Problems) [Kushner & Szanto] *2193
SYPHILIS: See also Neurosyphilis
asymptomatic, re-treatment after 16 years, 115
congenital, as cause of mental deficiency, (Coverville) 754—ab
electroencephalography in syphilitic encephalitis, Colombia, 1298
of ascending aorta, anatomic and roentgen changes in, [Lodoño] 1759—ab
primary-secondary, penicillin after mercury cyanide for, [Bolgert] 1498—ab
treatment, penicillin plus corticotherapy, [de Graclansky] 636—ab

SOCIETIES AND OTHER ORGANIZATIONS

Acad.—Academy	*Indust.—Industrial*
Am.—American	*Inst.—Institute*
A.—Association	*Internat.—International*
Coll.—College	*M.—Medical*
Comm.—Commission	*Med.—Medicine*
Commit.—Committee	*Nat.—National*
Conf.—Conference	*Pharm.—Pharmaceutical*
Cong.—Congress	*Phys.—Physicians*
Dist.—District	*Soc.—Society*
Div.—Division	*Surg.—Surgery*
Found.—Foundation	*Surgs.—Surgeons*
Hosp.—Hospital	*S.—Surgical*

Note:—For items on societies not found in the Medical News Section, see alphabetical listing in Index.

Acad. of Physical Med. and Rehabilitation, 1162
of Psychoanalysis, 1845
of Psychosomatic Med., 376, 852, 1605
Adams County Department of Health, 818
Agrupacion Universitaria del Uruguay, 1607
Air Pollution Control A., 851
Albert, Isaac, Research Inst., 2098
Alpha Kappa Kappa, Alpha Mu Chapter, 1463
Amarillo Soc. of Internal Med., 1160
Am. Acad. of Allergy, 853
Acad. for Cerebral Palsy, 1287
Acad. of Compensation Med., 373
Acad. of Dermatology and Syphilology, 710, 1287
Acad. of Forensic Sciences, 1843
Acad. of General Practice, 73, 74, 616, 851, 1064, 1284, 1714, 1721, 2208
Acad. of General Practice, Chapters, Arizona, 261; Iowa, 169; Oregon, 850
Acad. of General Practice, Comm. on Education, 1714, 2206
Acad. of General Practice, Comm. on Post-Graduate Education, 850
Acad. of Obstetricians and Gynecologists, 1721
Acad. of Ophthalmology and Otolaryngology, 1064, 1605
Acad. of Orthopedic Surgeons, 616
Acad. of Pediatrics, 74, 818, 854, 1721, 1844
Acad. of Physical Med., 1978
A. of Blood Banks, 1604, 2095, 2096
A. of Genito-Urinary Surgs., 1457
A. of Inhalation Therapists, 854
A. of M. Clinics, 1720
A. of Obstetricians and Gynecologists, 1066, 2209
A. of Obstetrics, Gynecology, and Abdominal Surgeons, 619
A. of Pathologists and Bacteriologists, 373
Board of Anesthesiology, 1720, 2095
Board of Internal Med., 370, 708, 854
Board of Pathology, 370
Board of Pediatrics, 848, 854
Am.—Continued
Board of Physical Med. and Rehabilitation, 1160
Board of Preventive Med., 371, 1605
Board of Psychiatry, 615
Board of Radiology, 2207
Board of Surg., 371, 1063, 1464
Board of Thoracic Surg., 371
Board of Urology, 1157
Cancer Soc., Inc., 853, 1602, 1718
Cancer Soc., Inc., Advisory Comm. on Personnel for Research of, 1063
Cancer Soc., Inc., Advisory Comm. on Research on Lung Cancer, 1461
Cancer Soc., Inc., Comm. on Research on Pathogenesis of Cancer, 1717
Cancer Soc., Inc., Minnesota Div., 1602
Cancer Soc., Inc., Research Advisory Council of, 1977
Chemical Soc., 373
Coll. of Allergists, 853
Coll. of Cardiology, West Virginia Chapter, 265
Coll. of Chest Phys., 371, 615, 1159, 1465, 1845
Coll. of Gastroenterology, 709
Coll. of Phys., 75, 618, 707, 1462, 1721, 1975
Coll. of Phys., Colorado Region, 1842
Coll. of Phys., Michigan Region, 1843
Coll. of Radiology, 73, 615
Coll. of Surgs., 371, 1063, 1464, 1721, 2097
Coll. of Surgs., Southern California Chapter, 1842
Cong. of Physical Med. and Rehabilitation, 1287, 1462
Diabetes A., 1605
Dietetic A., 709
Drug Manufacturers A., 1607
Federation for Clinical Research, 818, 1843
Found. for Allergic Diseases, 616, 1714
Goiter A., 852
Group Psychotherapy A., 1720
Gynecological Soc., 619
Hearing Soc., 616, 1759—ab
Heart A., 169, 374, 850, 853, 1463, 1604, 1714, 1977
Hosp. A., 375, 1462, 1978
Inst. of Electrical Engineers, 1065
Inst. of Nutrition, 851
Inst. of Psychoanalysis, 1845
Legion, Child Welfare Found., 1158
M. A., 169, 371, 375, 617, 706, 1157, 1163
M. A., Comm. on Aging, 1605
M. A., Council on Drugs, 1716, 1977
M. A., Council on Foods and Nutrition, 375
M. Writers' A., 1287, 1462
M. Writers A., Michigan Chapter, 2093
Ophthalmological Soc., 1066
Pediatric Soc., 75
Pharmaceutical Manufacturers' A., 1977
President Lines, 1978
Psychiatric A., 72, 1462, 1843, 2206
Public Health A., 375, 1161, 2095
Public Welfare A., 1605
Rheumatism A., 1462, 1843
Rhinologic Soc., 708
Roentgen Ray Soc., 73, 1462, 2207
Social Hygiene A., 1158, 1978
Soc. of Anesthesiologists, 616, 1716, 1720
Soc. of Biological Chemists, 373
Soc. for Clinical Investigation, 1604, 1605
Soc. of Clinical Pathologists, 377, 849, 855, 1975
Soc. of Human Genetics, 848
Soc. of Internal Med., 1160
Soc. of Maxillofacial Surgs., 1464
Soc. of Plastic and Reconstructive Surg., 1065
Soc. for the Study of Arteriosclerosis, 856, 2096
Soc. for Surg. of the Hand, 2208
Soc. of Tropical Med. and Hygiene, 1978
Trudeau Soc., 854, 1975, 2095
Argentine Soc. of Endocrinology and Metabolism, 856
Argentinian Allergy Soc., 708
Arizona Acad. of General Practice, 261
Greater, Heart A., 706
Arkansas Dermatological Soc., 261
M. Soc., 72
Armed Forces Epidemiological Board, 72
Forces Epidemiological Board, Central Comm. of, 1461
Forces Epidemiological Board, Comm. on Respiratory Diseases, 708
Artists' Guild, 1604
A. of Am. M. Colls., 373, 708, 1843, 1844
of Clinical Scientists, 1845
of Life Insurance M. Directors of America, 710
of Military Surgeons of the U. S., 616
of Phys. and Surgs., Pennsylvania Railroad, 1463
of Teachers of Preventive Med., 1287
Asociacion Mexicana de Patologos, 377
Australian Ophthalmological Soc., 1603
Australia's Department of Civil Aviation, 1715
Automotive Safety Found., 1063
Avalon Found., 1284
Babcock, Mary Reynolds, Found., 1158
Bahamas M. Conf., 1286
Baltimore City Health Department Venereal Disease Bureau, 1462
Bennett, A. E., Neuropsychiatric Research Found., 1286
Bertner Found., 2207
Bexar County M. Soc., 1464
Board of Internal Med., 616
of Pediatrics, 616
Boston, M. Physics Group of, 1965
Brazilian Allergy Soc., 708
British A. of Dermatology, 2093
Business and Professional Associates of the Am. Jewish Congress, 1844
Calhoun County Health Department, 2093
California Department of Public Health, 1461
M. A., 370, 1842
Southern, Inst. of Psychoanalysis, 1845
Southern, Radiological Soc. of, 706
State Board of M. Examiners, 1975
State Department of Public Health, 2205
State Department of Social Welfare, 2205
State Health Department, 72
Tuberculosis and Health A., 1714
Canadian Department of Transport, 1716
M. A., 1163
Carlsberg Found., 2207
Catholic Hosp. A. of the United States and Canada, 2208
Central Am. Pediatric Cong., 1160
Neuropsychiatric A., 1719
States Soc. of Industrial Med. and Surg., 614
Cincinnati, Greater, Radiologic Soc., 1977
Jewish Hospital A. of, 1719
University of, Inst. of Industrial Health, 1605
City of Hope M. Center, Duarte, Calif., 1749
Civil Aeronautics Administration, 1716
Charleston, South, Lions Club, 1159
Chicago A. of Commerce and Industry, 614
Board of Education, Bureau of Physically Handicapped Children and Division of Speech Correction, 1714
Graduate Club, 1063
Heart A., 73, 370, 614
Heart Center, 73
Inst. of Med., 1157, 1715
M. A., 73
Soc. of M. History of, 614, 1284, 1842
Neurological Soc., 706
Nutrition A., 1715
Ophthalmological Soc., 1715
Orthopaedic Soc., 706, 1842
Roentgen Soc., 73
Children's Hospital and Crippled Children's Guild, 615
Chilean Cancer Soc., 263
China M. Board of New York, 372
Cleveland, Acad. of Med. of, 1158
Jewish Community Federation of, 1719
Radiological Soc., 373, 2207
Clinical Orthopaedic Soc., 1605
Coll. of Am. Pathologists, 377, 1975
Colorado Public Health A., 1975
Soc. of Anesthesiologists, 1714
Soc. of Internal Med., 1842
State M. Soc., 72, 169, 1975
Comm. on Health Careers, 1718
on Influenza, 1461
Comm. on Naval M. Research, 1461
Common Cold Found., Scientific Advisory Comm. of, 1461
Commonwealth Fund, 1461, 1719
Conf. of State and Provincial Public Health Laboratory Directors, 1844
Congenital Heart Inst., 73
Congressus Internationalis Dermatologorum, 2096
Connecticut State Allergy Soc., 2205
State Board of Mental Health, 261
State M. Soc., 1714, 1842
Constantinian Soc., 1720
Council of Jewish Federations and Welfare Funds, New York City, 1719
Des Moines Health Department, 818
Detroit Roentgen Ray and Radium Soc., 371
Donner Found., 1843
Erie County M. Soc., 2207
Essex County Pathological and Anatomical Soc., 205
Faculte de Medecine de Paris, 1718
Federal Safety Council, 709
Finnish Pediatric A., 1462
Florida Soc. of Pathologists, 1157
Fond du Lac County M. Soc., 2096
Ford Motor Company, 72
Found., 818, 1285
Found. for Support of Pediatric Research, 1462
French Nat. Order of the Legion of Honor, 263
Gallatin, Albert, Associates of New York University, 1717
Georgia Department of Public Health, 370
German Diabetes A., 1979
Diabetes Comm., 1979
Pharmacological Soc., 1284
Gerontological Soc., 373
Geschicketer Found., 848
Goodman, Jane Bender, Hodgkin's Disease Research Fund, 2094
Gorgas Memorial Inst. of Tropical and Preventive Med., 2096
Gould, William and Harriet, Found. for M. Research, 264

Societies and Other Organizations—Continued.
Guggenheim, Daniel and Florence, Found., 1715
Guild of Prescription Opticians of America, Inc., 171
Gulf Coast Clinical Soc., 709
Harvard M. Alumni Council, 1715
Harvard-Guggenheim Center for Aviation Health and Safety, Boston, 1715
Hawthorne S. Soc., 264
Health Information Found., 1720
Hematology Research Found., 1161
Hertzler Research Found., 1063
Hill-Burton Program, 2094
Hosp. for Joint Diseases, Alumni A. of, 1159
Industries' A., 373
Huron District M. Soc., 850
Hyde, Lillia Babbitt, Found., 1463
Illinois Acad. of General Practice, 706
Soc. of Anesthesiologists, 614
Soc. of Pathologists, 1602
State Department of Health, 370
State Department of Public Health, Div. of Hosps. and Chronic Illness, 818
State M. Soc., 1461
Indiana Acad. of General Practice, 371
State M. A., 370, 1461
Indust. Hygiene Found., 1065
M. A., 614
Inst. for the History of Med., University of Frankfurt, 1464
of Internat. Education, 852
of Physical Med. and Rehabilitation, 1979
of Reconstructive Plastic Surg., 1284
for the Study of Analgesic and Sedative Drugs, 1606
for Tuberculosis Research, University of Illinois M. School, 1715
Instrument Soc. of America, 1065
Inter-Am. Coll. of Radiology, 2207
Interdepartmental Health Resources Board, 615
Internat. Acad. of Proctology, 1286
Advisory Council, 375
Coll. of Surgs., 370, 618, 1715
Coll. of Surgs., European Federation, 618
Cong. on Diseases of the Chest, 1845
Cong. for Med., 377
Cong. of Neurological Sciences, 264
Cong. on Proctology, 266
Cooperation Administration, 377, 818
Corresponding Club, 1287
Diabetes Cong., 1979
Diabetes Federation, 1979
Hosp. Federation, 2097
Proctologic Cong., 1721
Seminar on Hosp. Architecture and Techniques, 2097
Soc. of Angiology, 709
Soc. of Clinical Pathology, 849, 1843
Soc. of Hematology, 1979
Soc. of Internal Med., 2097
Soc. of Surg., 266
Surgs. Hall of Fame, 1157
Symposium of Radioactive Isotopes, 1978
Union Against Cancer, 372
Union of Architects, 2097
Inter-Soc. Cytology Council, 1286
Interstate Postgraduate M. A. of North America, 75, 1162
Irwin Memorial Fellowship Fund, 850
Jamar M. A., 1846
Science Council, 1816
Jersey City M. Alumni A., 1064
Joint Comm. on Mental Illness and Health, 852, 1606
Kellogg W. K., Found., 377, 1604, 2208
Kenty, Sister Elizabeth, Found., 852
Kentucky State M. A., 73
Kress, Samuel H., Found., 1463
Laentnec Soc., 1859
Lancaster County M. Soc., 371
Lasker, Albert and Mary, Found., 1605
Lions Club, 1461
Los Angeles County Heart A., 72
Radiological Soc., 264
Louisiana Acad. of General Practice, 262
Pathology Soc., 1284
Southwest, Graduate M. Assembly, 73
Lovelace Found. for M. Education and Research, 1159
Mannerheim League for Child Welfare, 1462
Marion County Board of Health, 1977
County Health Department, 1977
Maryland Acad. of General Practice, 614, 1975
Mayo A., 1462
Found., 1157, 1462, 1716, 2093
Found. for M. Education and Research, 1462
M. A. of South Africa, 1285
and Pharmaceutical Information Bureau, 170
Research Council, Pneumoconiosis Research Unit, 849
Memorial Center for Cancer and Allied Diseases, 1165
Memphis Thoracic Soc., 2207
Menninger Found., 1158, 2206
Merck Inst. for Therapeutic Research, 2093
Methodist Church, Board of Missions, 2208
Metropolitan Life Insurance Co., 1718
Michigan Allergy Soc., 74, 2093
Department of Health, 2093
Heart A., 374, 849
Pathological Soc., 1975
State M. Soc., 74
Milwaukee Acad. of Med., 1464, 1717
Health Department, 1285
Minnesota M. A., 707
Radiological Soc., 707
State Dental A., 1602
Mississippi Acad. of General Practice, 1463
State Board of Health, 1975
State M. A., Mental Health Comm. of, 1064
Valley Conf., 2095
Valley M. Soc., 818, 850
Missouri Acad. of General Practice, 707
Public Health A., 707
Mohawk Valley Neuro-psychiatric Soc., 615
Mont Reid S. Soc., 1463
Montana M. A., 849, 1284
Motley, Lila, Cancer Found., Inc., 1976
Myers Found., 618
Nassau Neuropsychiatric Soc., 1843
Nat. Acad. of Sciences—Nat. Research Council, 75, 854, 1067, 1606
Acad. of Sciences—Nat. Research Council, M. Fellowship Board, 1461
Advisory Arthritis and Metabolic Diseases Council, 1605, 1843
Advisory Health Council, 1461
Advisory Heart Council, 1975, 2094
Advisory Neurological Diseases and Blindness Council, 1158
A. for Music Therapy, Inc., 375
Board of M. Examiners, Test Comm. in Med., 1463
Boxing A., 1160
Cancer Cong., 263
Cancer Inst., 708, 851, 1157, 1977
Cancer Inst., Cancer Chemotherapy Nat. Service Center, 1462
Council To Combat Blindness, Inc., Scientific Advisory Comm. of, 852
Found. for Infantile Paralysis, 73, 1845
Health Council, 1718
Inst. of Allergy and Infectious Diseases, 1604
Insts. of Health, 263, 707, 708, 849, 850, 1843, 1975, 1976
Insts. of Health, Morphology and Genetics Study Section of, 1977
M. A., 264
Muscular Dystrophy Research Found., Inc., 851
Office of Vital Statistics, 75, 171, 265, 376, 617, 710, 855, 1066, 1161
Research Council, Comm. on Disaster Studies of, 708
Safety Council, 709, 1720
Science Found., 264, 1066
Security Agency, 1718
Soc. for the Prevention of Blindness, 1603
Tay-Sachs A., Inc., 2097
Tuberculosis A., 614, 707, 854, 1158, 1714
Tuberculosis A. Comm. on Cooperation with Federal Agencies, 2095
Wrestling A., 1160
Nebraska A. of Pathologists, 1716
Cancer Soc., 2094
Nevada State M. A., 1158
New Jersey Neuropsychiatric A., 1463, 1843
Rheumatism A., 267
Soc. of Clinical Pathologists, 1602
Soc. of Internal Med., 1158
State Department of Institutions and Agencies, 1602
State Department of Health, Bureau of Pathology, 1602
State Gastroenterological Soc., 262
New Orleans Graduate M. Assembly, 2208
New York Acad. of Med., 263, 375, 849, 1603, 1604, 1844
Acad. of Sciences, 169
Allergy Soc., 1843
Central Ex., Ear, Nose and Throat Soc., 1064
City Board of Health, 1604
City Department of Health, 615
City Department of Welfare, 2094
City, Mayor's Advisory Comm. for the Aged, 2094
Diabetes A., 372
Found., 1716
Inst. of Clinical Oral Pathology, 849
Northeastern, Radiological Soc., 707
Public Health Research Inst., 1604
Soc. for Clinical Ophthalmology, 1158, 1603
State Acad. of General Practice, 372, 849
State Department of Health, 263, 372, 1158, 1285, 1603, 2095
State Department of Mental Hygiene, 1976
Tuberculosis and Health A., 264
New Zealand Ophthalmological Soc., 1603
North Carolina Acad. of General Practice, 2094
Pediatric Soc., 1976
Nutrition Found., 1463, 1605
Oak Ridge Inst. of Nuclear Studies, 1977, 2095
Ohio Department of Health, 2095
Tuberculosis and Health A., 2095
Oklahoma Colloquy on Advances in Med., 1977
Omaha Mid-West Clinical Soc., 1065
Onondaga County M. Soc., 1064
Health A., 708, 2094
Optical Soc. of America, 1462
Oregon Acad. of General Practice, 170
Heart A., 850
Orthopaedic Research and Education Found., 2097, 2208
Ottawa County Health Department, 2093
Pacific Coast Fertility Soc., 618
Northwest Radiological Soc., 1720
Northwest Soc. of Plastic and Reconstructive Surg., 76
Pan American A. of Ophthalmology, 852
Cong. on Endocrinology, 856
M. A., 377
Sanitary Bureau, 618
Pan-Pacific S. A., 1065
Parkersburg-Wood Health Department, 1977
Pennsylvania Acad. of Physical Med. and Rehabilitation, 1285
A. of Blood Banks, 1604
A. of Clinical Pathologists, 1604
M. Soc. of the State of, 170, 1604, 2207
M. Soc. of the State of, Comm. on Blood Banks, 1604
Radiological Soc., 1285, 2207
Soc. of Anesthesiologists, 2095
Phi Beta Pi, 1462
Theta Chapter, 1715
Phi Chi M. Fraternity, 1284
Phi Delta Epsilon Fraternity, 1063, 1159
Fraternity, Chapters, Alpha Pi, 1843; Beta Epsilon, 1159; Gamma, 708; Miami, 706; Nu, 1603; Omicron, 1603; Sigma, 1159
Phi Rho Sigma, 1604
Philadelphia Allergy Soc., 264, 2095, 2207
County M. Soc., 708, 1285
Pathological Soc., 1845
Pediatric Soc., 848
Pickett, James, Found., 75, 854, 1606
Pittsburgh, University of, M. Alumni A., 850
Nuclear Med. Soc., 2207
Planned Parenthood Federation of America, 1606
President's Citizens Advisory Comm. on the Fitness of Am. Youth, 373
Professional Group on M. Electronics of the Inst. of Radio Engineers, Boston Chapter, 1065
Radiological Soc. of North America, 2096, 2207
Rands Family Found., 849
Reed, Walter, Army Inst. of Research, 2093
Rippel, Fannie E., Found., 1602
Rockefeller Brothers Fund, 852
Found., 373, 376, 851, 1461, 1718, 1975, 2093
Inst., 1159
Rocky Mountain Radiological Soc., 1066
Rotary Internat., 1845
Royal Canadian Air Force, 1715
Coll. of Obstetricians and Gynecologists, 619
Coll. of Phys. and Surgs. of Canada, 2208
Coll. of Surgs. of England, 1063
Medico-Psychological A. of Great Britain, 614
Soc. of Health of London, 1843
Soc. of Med., 263
Rubin, Samuel, Found., 375
St. Louis Acad. of General Practice, 2206
Soc. of Anesthesiologists, 74
St. Paul Hearing Soc., 618
San Francisco Acad. of General Practice, 261
Santa Clara-Monterey Counties Psychiatric Soc., 72
Senior Citizens Service Corps, 2094
Sloan, Alfred P., Found., 1716, 2206
Inst. of Hosp. Administration of the Graduate School of Business and Public Administration at Cornell, 1716
Sociedad Argentina de Proctologia, 1721
Soc. for Applied Bacteriology, 1845
of Biological Psychiatry, 1286
of Experimental Biology and Med., 373
of Illustrators, 1604
of Nuclear Med., 1718
for Pediatric Research, 848, 1978
for the Rehabilitation of the Facially Disfigured, 1285
of University Surgs., 1063
South Dakota Board of M. Examiners, 264
State M. A., 264, 376
Southeastern Allergy A., 853
Southern M. A., 1163
Southwestern M. A., 616
Soc. of Nuclear Med., 852
Swedish Air Force, 1715
Symposium on Fundamental Cancer Research, 2207
Syracuse Rheumatic Fever Found., 708
Temple University M. Alumni A., 2096
Tennessee State M. A., 1160
Texas Department of Health, 1718
Physical Med. and Rehabilitation Soc., 1160
Soc. of Anesthesiologists, 373
Soc. of Plastic Surgs., 373
Toronto University, M. Alumni A. of, 1716
UNICO Nationale, 2206
Nationale, St. Louis Chapter, 2206
United Cerebral Palsy A., 707
Mine Workers of America, 707

V 16
1957

Societies and Other Organizations—Continued
U. S. Air Force, 1715
Army, 1715
Army M. Corps, 73, 1161
Atomic Energy Commn., 855, 1285, 1606, 1977, 2207
Civil Service Commn., 615
Department of Agriculture, 1977
Department of Commerce, 1716
Department of Defense, 1717
State Department, 1717
Operations Mission in Santiago, Chile, Div. of Health and Welfare, 370
Public Health Service, 74, 263, 264, 370, 708, 709, 849, 1463, 1718, 1975, 1976, 1977, 1978, 2094, 2206
Public Health Service, Board of Scientific Counselors of Nat. Inst. of Arthritis and Metabolic Diseases, 1064
Public Health Service, Bureau of State Services, 170
Public Health Service, Div. of Research Grants, 72
Public Health Service, Nat. Advisory Cancer Council, 372
Public Health Service, Nat. Advisory Comm. to the Psychopharmacology Center, 1064
Public Health Service, Nat. Inst. of Mental Health, 2095
Public Health Service, Official Exchange Mission to the U. S. S. R., 2205
Public Health Service, Physiology Study Section, 169
Vermont State M. Soc., 1160
Veterans Administration, 263, 265, 374, 1158, 1975
Virginia, M. Soc. of, 1064, 1605
Western, Pediatric Soc., 1605
Washington State Department of Health, 374
State Heart A., 374
West Virginia Heart A., 1717
State M. A., 374, 1977
Western Occupational Health Conf., 265
Soc. for Clinical Research, 2096
Soc. for Pediatric Research, 1717
S. A., 1464
White, William Alanson, Inst. of Psychiatry, Psychoanalysis and Psychology, 1845
Willmar Dental Study Club, 1602
Wills Eye Hospital Staff and Soc. of Ex-Residents, 1844
Wisconsin Anti-Tuberculosis A., 1285
Doctor's Bowling Tournament, 2096
Military District, 1718
Soc. of Internal Med., 1160
State M. Soc., 1161, 2096
Worcester Found. for Experimental Biology, 1606
World Federation for Mental Health, 375
Federation of Neurosurgical Soc., 76
Health Organization, 371, 618, 1160, 1285, 1976
Health Organization Comm. on International Quarantine, 17–0
Rehabilitation Fund, 853, 1978
Yale M. Soc., 1714
University, School of Med., Arthritis Study Unit, 1714

T

TEM: See Trichlylene Melamine
TAKES DORSALIS
lightning pains due to, treatment, 314
TACHYCARDIA
ventricular paroxysmal, quinidine vs. rapid digitalization for, 2029
TAIWAN, medical life in, (photos) [Pankratz] 1486—C
TAKACS, KAROLY, right arm amputee Olympic champion pistol shooter, [Jokl] *129
TAKAYASHU'S SYNDROME
obliterative brachiocephalic arteritis, [Gibbons] 628—ab
TANNING
industry, industrial disease in, [Kern] 117; 1648
Sun Tanning: See Sun
TAR
coal tar sensitivity, analgesics and antipyretics which do not contain? 2031
TASTE
loss of, after tonsillectomy, treatment, 1898
perversion, etiology, diagnosis, 1770
TAUSSIG-BING'S DISEASE, [Mispireta] 739—ab
TAX
deferment for self-employed, Committee annual report on, 988
income, Committee annual report on amendments to Internal Revenue Act, 988
TAY-SACHS Disease: See Idiocy, amaurotic
TEA
excess, causes false diagnosis of hyperthyroidism, [Jackson] *1533
TEACHERS: See under Schools
TEARS: See Lacrimation
TECHNOLOGISTS
medical, approved schools for, 1454
TEENAGERS: See Adolescence
TEETH: See also Dentistry
caries, fluoridation to control, N. Z., 1072
enamel loss, etiology and treatment, 199
premature eruption with many caries, etiology, treatment, 112
TELANGIECTASIA
hereditary, [Bird] 1320—ab
TELEVISION
activities, A. M. A. Public Relations annual report on, 991
American physician on "Wide Wide World," 841
in health education field, A. M. A. annual report on, 1017
"M.D. International," (advance showing) 2092; (Jan. 23) 2203
medical, annual report on, 1014
medicine response in Wausau, Wis., 840
national conference on use in health field, 56; 1056
Smith, Kline and French project, annual report on, 994
thrombosis in legs after prolonged viewing, [Naidel] *881; (reply) [Calderone] 2220—C
tubes, throat irritation from cleaning: 908
TEMPERATURE
of operating rooms, 764
TEMPERATURE, BODY
menthol, after smoking, 424
TEMPLE UNIVERSITY
cancer research grants to, 264
TEMPOSIL: See Carbimide, citrated calcium
TENDONS
rheumatoid arthritis presenting as tenosynovitis, [Jacobs] 752—ab
TENOSYNOVITIS: See Tendons
TENSION: See Stress
TERMINOLOGY
Biot's "meningitic" breathing vs. jerky and irregular breathing, 1568—E
cancer nomenclature, various systems, 1156
5-year median, explanation of term, 765
interpretation of internal urethrotomy, 200
location of tumor diagnoses in Standard Nomenclature punched-card index, [Vermilion] *2181
new nomenclature tool, annual report on, 1022
Nomenclature Institutes in 1958, 1833
Standard Nomenclature of Diseases and Operations, annual report, 981
TERRAMYCIN: See Oxytetracycline
TESTES
disorders, sex chromatin pattern in; relation to hermaphrodism and Klinefelter's syndrome, [Grumbach] 900—ab
ectopic splenic tissue resembling third testicle, [Daniel] 1205—ab
enlarged in leukemia, etiologic relationship, diagnostic procedures, 910
Hormone: See Androgens
morphology in relation to nuclear sex in Klinefelter's syndrome, [Ferguson-Smith] 2237—ab
torsion, fixation in scrotum, 1767
tumors, metastasis from, 2033
tumors, parateticular interstitial cell, in boy 11, [Barrett] 1884—ab
undescended (bilateral), bilateral seminoma in, [Kummer] 1641—ab
undescended, indications and results of operation, [Hallman] 1194—ab
undescended, nuclear sex chromatin in, [Sohval] 2023—ab
TESTIMONY
expert medical, [Medicine and the Law] *702
medical, textbooks in lieu of, [Medicine and the Law] *701
medicolegal, A. M. A. Committees for Review of [Medicine and the Law] *703
TETANUS
acute, hibernation and serotherapy for, [Diaz Cano] 1346—ab
antiserum: nervous, allergic reaction to, in meningococcic meningitis, [Corsini] 2233—ab
antitoxin protection reduced when steroids are used, [Bookman] *1950
is neglect of antitetanic serum defensible? Swedish disciplinary case, 627
spasm in, chlorpromazine for, [Ricci] 2128—ab
toxoid, various routes of immunization for, (replies) [McComb; and original consultant] 1349; 1520
treatment evaluated, [Creeck] 2128—ab
TETRACYCLINE
erythromycin, oleandomycin, and spiramycin combinations; in vitro and antibacterial action of blood after, [Jones] 2237—ab
treatment (intravenous) in chronic bronchitis and bronchiectasis, [Fox] 1208—ab
treatment of acute purulent meningitis, [Koch] 1083—ab
treatment of chronic amebiasis, [Ruiz Sanchez] 2020—ab
treatment of typhoid, India, 1987
treatment plus chloramphenicol in salmonellosis in children, [Streitfeld] 1507—ab
TETRACYN: See Tetracycline
TETRADECYLAMINE ACETATE
toothpaste, revolutionary, N. Z., 1072
TETRAETHYLTHIURAMDISULFIDE: See Disulfiram
TETRALOGY of Fallot: See Heart anomalies
TEXTILES: See also Nylon; Orlon; Silk
creaseless fabrics, dermatitis from, Norway, 870
THALASSEMIA MINOR: See Leptocytosis
THALLIUM
toxicity, recurring problem, (Council report) 1566
THERMOMETERS
dry-bulb, wet-bulb, and globe (WBGT), in prevention of heat casualties, [Minard & others] *1813
THORACIC DUCT
surgical treatment of chylothorax due to trauma of, [Giordano] 743—ab
THORAX
chest x-rays in diagnosis of tuberculosis in Milwaukee's skid row, 1285
chest x-rays, mass, and radiation exposure, 908
chest x-rays, USPHS recommends selective basis, 1980
disease on university campus, [Myers] 185—ab
disease research in, India, 869
disease, scalene node biopsy, value in, [Schiff] 1501—ab
lesions biopsied under thoracoscopic vision, [Heine] 742—ab
pain as only symptom of gastric ulcer, [Shedrow] 2011—ab
pain from electric motor cleaners? 1768
surgery, anesthesia for, Brazil, 1730
wall, desmoid tumor of, [Gatchell] 2021—ab
THORAZINE: See Chlorpromazine
THROAT
examination, laryngospasm during, 1515
irritation from cleaning television tubes? 908
THROMBIN
solutions (oral) alone ineffective for esophageal varices, 640
THROMBOANGIITIS OBLITERANS
in female, [Gaylis] 1187—ab
THROMBOEMBOLISM: See Thrombosis
THROMBOPHLEBITIS
idiopathic migrating, prevention of, 1353
infectious, recurring with suprapubic pain and frequent urination, treatment, 164:1857, Aug. 17, 1957; (correction) 165:711, Oct. 12, 1957
migrans, [Lefemine] 1186—ab
treatment, anticoagulants, Brazil, 1731
treatment Butazolidine, [Høst] 637—ab
treatment, medical, [Kramer & Medeiros] *767
THROMBOSIS
carotid and basilar artery, systemic blood pressure role in cerebral circulation in, vasopressor agents for, [Shanbrom] 2012—ab
cerebral, anticoagulants after; control, duration of treatment, 116
coronary, and diet, hypothesis and fact, [Yudkin] 1495—ab
in legs after prolonged television viewing, [Naidel *881; (reply; long aviation travel also) [Calderone] 2220—C
of inferior vena cava in childhood, [Liddle] 1340—ab
of internal carotid artery, arterial surgery for, [Rob] 1638—ab
postoperative thromboembolism, prophylaxis and therapy, [Winhöfer] 757—ab
prophylaxis, limitations of, [Ruser] 2009—ab
renal vein, in newborn infants of diabetic mothers [Avery] 107—ab
subclavian artery, and cervical rib, [Shenkin] *835
thromboembolic complications of surgery, [Heinrich] 289—ab
thromboembolism, 3 anticoagulants evaluated in, [Neilson] 186—ab
treatment, anticoagulants, Brazil, 1731
treatment, trypsin, [Bernardi] 1753—ab
venous, simulating arterial embolization with major gangrene, [Waller] *344
THRUSH: See Moniliasis
THUMB: See Fingers
THYMOL
turbidity test in screening of blood donors, [Jennings] 414—ab
THYMOMA
myasthenia gravis after removal of, [Rowland] 1879—ab
problems in surgical management, [Soutter] 2227—ab
THYMUS
cyst in neck, [Crawford] 753—ab
THYROID
cancer reactivated by pregnancy? 1646
depression after high doses of vitamin A, [Logan] 1644—ab
disease, radioiodine profile in diagnosis, [Rubenfeld] 1743—ab
hormone, peripheral disappearance after exercise, Spain, 2107

THYROID—Continued
lingual, I^{131} to diagnose, [Carvalho] 2026—ab
prenatal effect on child of mother taking, 198
preparations, potency for hypothyroidism, [Jackson] *121
tumors, clear cell, [Chesky] 2021—ab
THYROIDITIS
subacute, and mumps virus, Israel, 722
subacute, mistaken for pharyngitis, [Volpe] 2117—ab
THYROTOXICOSIS: See Goiter, Toxic
TIC DOULOUREAUX: See Neuralgia, trigeminal
TICKS
bites: prophylaxis against, removal of ticks, treatment of bite, 1089
Colorado tick fever, [Drevets] 1494—ab
paralysis from, [Wilkes] 874—C
TILES
manufacture, inhalation of barium carbonate, hazards in, 913
TISIN: See Isoniazid
TISSUES
cancerous and noncancerous, spectrographic study of trace elements in, [Tietz & others] *2187
culture technics in diagnosis of mumps, [Utz] 2132—ab
cultures, changing status of virological diagnostic services, [Cheever] *2059
TOBACCO
cancer of bladder and, France, 1299
excessive use causes false diagnosis of hyperthyroidism, [Jackson] *1533
less arsenic and lead in, United Kingdom, 2218
smoker's lung, Canada, 623
smoking and lung cancer research, United Kingdom, 87; 89; (in women) 90
smoking habits, (United Kingdom) 1303; (of school children, Norway) 2106
smoking in relation to deaths from cardiac and vascular causes, [Mills] 1761—ab
smoking, mouth temperature after, 424
TOCOPHEROL: See Vitamins E
TOES
ulcer in diabetic, treatment, 423
TOLBUTAMIDE: See Sulfonylureas
TONGUE
cancer, radium for, [Breed] 2025—ab
coating of, diagnosis and treatment, 1515
congenital macroglossia, treatment, 2243
dry, in man 70, etiology, treatment, 115
hyoid-larynx column, deficiencies of motion after poliomyelitis, [Bosma] *2106
TONSILLECTOMY
always justified? Canada, 624
anesthesia for, after removal of pheochromocytoma, 1225
loss of taste after, treatment, 1898
preanesthetic medication in children, 201
TOOTHPASTE: See Dentifrices
TORTULOPSIS
glabrata, infections involving increased, identification, [Wickerham] *17
TOXICOLOGY: See Poisoning; under names of specific substances
TOXOID
treatment for amyotrophic lateral sclerosis, 765
TOXOPLASMA
in amniotic fluid, [Schmidtke] 2014—ab
TOXOPLASMOSIS
acquired, autopsy findings, [Hooper] 1212—ab
during childhood, treatment, [Käser] *891—ab
newer knowledge, [Wright] 1890—ab
ocular, [Forbes] 1206—ab
pregnancy advisable after newborn infant died of hydrocephalus from? 1221
TOYS
lead poisoning hazard from paint on, [Miscellany] 1996
TRACE ELEMENTS: See Elements
TRACHEA
compression as cause of asthmatic wheezing, [Dekker] 185—ab
endotracheal tube, new modifications, [Cole] *149
perforation from Sheldon tracheotome, [Smith] *2074
TRACHEOSTOMY
button, plastic, [Moore] *1276
TRACHEOTOMY
instrument, new rapid, [Salvatore & Maloney] *2077
percutaneous, [Sheldon & others] *2068
Sheldon tracheotome perforates trachea, [Smith] *2074
TRACHOMA
etiology, studies on; isolation of virus in chick embryo, [T'ang] 1207—ab
TRACTION
mechanical, in lumbar disk syndrome, [Parsons] 1188—ab
TRADE: See under Industrial
TRAFFIC ACCIDENTS: See Automobiles
TRANQUILIZING DRUGS: See also specific drugs as Rauwolfia serpentina
comparative study in neuropsychiatric patients, [Pennington] 293—ab
TRANQUILIZING DRUGS—Continued
in infant psychiatry, Peru, 1474
in management of regional enteritis, [Bargen] *2045
in rehabilitation of chronic mental illness, [Ferguson] *1677
new, perphenazine, Canada, 720
seminar presented by Suffolk County Society and VA Hospital, 858
symposiums, (U. of Mississippi) 1064; (Peru) 1472
TRANSAMINASE (aminopherase)
clinical experience, [Bunch] 2006—ab
glutamic oxalacetic and glutamic pyruvic, in myocardial infarction, [LaDue] *1776
in dermatomyositis, [de Moragas & others] *1936
in diagnosis of myocardial infarction, comparison with blood aldolase, cholesterol, α_2-globulin, iron, copper and lactic dehydrogenase, [Hanson] 1315—ab
in myocardial infarction, [Carcassi] 1871—ab; [Wróblewski] 2007—ab
in pulmonary disease and multiple infarctions, [Walsh] 99—ab
TRANSFERRIN
blood levels in malignant diseases, Austria, 85
TRANSPORTATION
of sick and injured in civilian aircraft, [Wright] *808
safe, of newborn infants for emergency surgery, [Bishop] *1230
TRAUMA
abdominal, blood studies in differential diagnosis of, [Berman & others] *1537
Automobile Accidents: See Automobiles
Burns: See Burns
care of severely injured patient, A. M. A. panel reports, (orthopedic) [McCarroll] *1943; (urological) [DeWeerd] *1946; (plastic surgery) [Anderson] *1922; (neurosurgical) [White] *1924; (psychiatric) [Kottke] *1930
causalgia from, [Owens] 1877—ab
eye injury, recurrent corneal erosion after, 1356
Fractures: See Fractures
hyperfusion from? 1357
Industrial: See Industrial Accidents
injured boy charged 81 by physician, United Kingdom, 2217
metatraumatic ligation of carotid artery, cerebral damage after, [Venzlaff] 100—ab
peptic ulcer activity relationship, 1895
radiohumeral bursitis from? [Paul] 1752—ab
spleen injuries, splenectomy for in child 8, disability after? 1356
thoracic duct lesions after, surgical treatment of chylothorax due to, [Glordano] 743—ab
transportation of sick and injured in civilian aircraft, [Wright] *808
ventricular septal wound treated successfully, [Mahaffey] 2228—ab
TRAVEL
international, smallpox spread by, 1720
no free operation to American visitor, United Kingdom, 1857
prophylaxis of amebiasis for travelers, (reply) [Kean] 1518
USPHS Fund for International Ophthalmology Congress in Brussels, 1981
TREATIES
Bricker amendment, Committee annual report on, 988
TREMOR
"flapping," hepatic-type without hepatic disease, [Smythe & Barnody] *31
TRIAMCINOLONE DIACETATE
new corticosteroid in dermatology, [Rein & others] *1821
TRICHINOSIS
eosinophilic myocarditis related to, death due to, [Chase] *1826
treatment, ACTH and cortisone, [Brinkman] 1081—ab
TRICHURIASIS
treatment, dithiazanine, effective, [Swartzwelder & others] *2063
TRICUSPID VALVE
incompetence, confusion with mitral insufficiency, [Schilder] 2227—ab
stenosis, [Pantridge] 1184—ab
TRIETHYLENE MELAMINE (TEM)
treatment plus radiation in retinoblastoma, [Reese] 106—ab
L-TRIIODOTHYRONINE: See Liothyronine, Sodium
TRILAFON: See Perphenazine
TRIMETHYLENE: See Cyclopropane
TROFORMONE
in radiodermatitis, value of, [Lelièvre] 760—ab
TROMEXAN: See Ethyl Biscoumacetate
TROPICAL DISEASE
splenomegaly, liver biopsy in, India, 868
TRYPANOSOMIASIS
Brazilian, cardiac complications of, 1730
TRYPSIN
treatment of recurring infectious thrombophlebitis with suprapubic pain and frequent urination, 164:1857, Aug 17, 1957; (correction) 165:711, Oct. 12, 1957
treatment of thrombotic syndromes, [Bernardi] 1753—ab
TRYPTAR: See Trypsin
TUBADIL: TUBARINE: See Tubocurarine Chloride
TUBE
endotracheal, 2 new modifications, [Cole] *149
intestinal, abuse of, [Farrel] 882—ab
lumen (triple), and double balloon for bleeding esophageal varices, 640
TUBERCLE BACILLUS
in osseous tuberculosis treated with antibiotics, [Durlez] 1328—ab
streptomycin-resistant, Colombia, 1298
viable, in closed lesions, [Hurford] 303—ab
TUBERCULIN
sensitivity in sick children, India, 1300
sensitivity, prevalence, relation to BCG vaccination, [Aquinas] 2027—ab
simultaneous Mantoux and Vollmer tests in school children, [Waegele] 308—ab
TUBERCULOMA
hamartomas of lung compared, [Bleyer] 904—ab
TUBERCULOSIS
BCG vaccination of newborn, results: exposure to and development of tuberculosis after, [Dannenbaum] 758—ab
BCG vaccination, optimum age for, [Pollock] 1760—ab
BCG vaccination, prevalence of tuberculin sensitivity after, [Aquinas] 2027—ab
blood lipid partition in, India, 1472
complicating pregnancy, treatment, [Schaefer & others] *2163
congress, Peru, 1622
corticosteroid medication in presence of? 2032
deaths rise in state, Mich., 2093
hazard of tuberculous clerk employed at school, 312
in BCG-vaccinated nurses, [DeFriez] 1760—ab
in Milwaukee's Skid-Row, 1285
in miners, financial aid for, India, 1733
incidence among workers in medical laboratories, [Reid] 1347—ab
incidence declines, 1611: (United Kingdom) 1738
James Alexander Miller Fellowship in, 264
leprosy interrelationship, immunological, Brazil, 1070
leprosy relationship, [Brown] 2027—ab
liposa, radiation therapy for, cancer after, United Kingdom, 89
miliary and meningeal, survival in, [Williams] 2235—ab
miliary and primary, skeletal tuberculosis in children treated for, [Milgram] 408—ab
outbreak in school, from food handler, [Moss] 1635—ab
primary, infantile, protected cortisone treatment, [Del Principe] 298—ab
primary, prolonged and complicated forms, surgery in, [Giraud] 402—ab
sanatorium for children, Peru, 87
state survey to be made, Ohio, 2095
statistics, United Kingdom, 1177
surgical treatment, Brazil, 1853
suspected, follow-up of X-ray surveys, 422
treatment, calcinosis factor significance in, [Holtz] 1497—ab
treatment in Macaca mulatta monkeys, [Fleming] 2133—ab
treatment in military hospital, [Burke] 877—ab
treatment, PAS-dihydrostreptomycin-isoniazid, eczema from, [Crissey & others] *1526
treatment, Verazide and related hydrazones, [Rubbo] 2235—ab
treatment, vitamin D_2, India, 1173
TUBERCULOSIS OF LUNG
arrested, drugs cause hirsutism or depress spermatogenesis? Pregnant mare's serum gonadotropin contraindicated in? 909
blood glycoprotein and sedimentation rate in, India, 1472
bronchiectasis with, significance, [Curtis] 741—ab
bronchography in, [Laitinen] 1348—ab
diabetes with, antibiotics in development, [Mattei] 734—ab
from phthisiologist to lung specialist, Sweden, 1302
in children, antibiotics influenced course to what extent? [Piéchaud] 889—ab
inactive, inhalation of dust harmful in? 2141
intracavitary aspiration in, [Giaquinto] 1318—ab
mass x-ray screening for, radiation exposure, 908
mass x-ray survey, USPHS recommends selective basis, 1980
minimal, early evaluation in recent antimicrobial era, [Krueger] 1316—ab

V 16
1957

TUBERCULOSIS OF LUNG Continued
primary, localized consolidation secondary to, in young adult, [Jaudou] 1743—ab
surgical treatment, exeresis in children, [Wapler] 747—ab
surgical treatment, Finland, 1985
surgical treatment, lobectomy, [Björk] 102—ab; (Sweden) 626
surgical treatment, plombage in, [Joly] 1192—ab
surgical treatment, resection, [Gontijo] 752—ab; (indications and results) [Homma] 288—ab; (critical review) [Bickford] 1191—ab; (500 cases) [Roger] 1636—ab
surgical treatment, results, [Vilkari] 743—ab
surgical treatment, streptokinase-streptodornase in, [Streetel] 1192—ab
surgical treatment, thoracoplasty, course after, Norway, 387
treatment, cortisone and prednisolone as adjuvants in, [Berneman] 2127—ab
treatment, cyanoacetic acid hydrazide, [Hecht] 110—ab
treatment, cycloserine toxicity in, United Kingdom, 1738
treatment, high doses of isoniazid alternated with other drugs, including pyrazinamide, [Reader] 1316—ab
treatment, isoniazid and Nupasal-213 combined, toxicity and cross-resistance, [Uthbert] 1887—ab
treatment, viomycin, [Naegeli] 1210—ab
treatment, viomycin vs. oxytetracycline, [Pines] 410—ab
TUBOCURARINE CHLORIDE
treatment of myasthenic crisis, [Churchill-Davidson] 898—ab
TUMORS
adrenal, adrenal atrophy in Cushing's syndrome due to, [Kyle] 1341—ab
adrenal cortical, functioning and nonfunctioning, [Heinbecker] 749—ab
bladder, Au^{198} grains for, [Yates-Bell] 195—ab
bladder, total cystectomy in, [Schwartz] 1201—ab
bladder, transcystoscopic radioactive colloidal chromic phosphate for, [Christensen] 1640—ab
cardiac, primary, surgical treatment, [Robertson] 1503—ab
Chromaffin Cell: See Pheochromocytoma
clear cell, of thyroid, [Chesky] 2021—ab
desmoid, of intercostal muscles and thoracic wall, [Gatchell] 2021—ab
diagnoses, location in Standard Nomenclature punched-card disease index, [Vermillion] *2184
ectopic gastric mucosa cause? 117: (replies) [Berger: and original consultant] 2142
endocrine, multiple, and peptic ulcer, [Fisher] 899—ab
glomus, gastric, [Shocket] 718—ab
glomus, is it rare? [Vollset] 2238—ab
interstitial cell, paratesticular, in boy 11, [Barrett] 1884—ab
intracranial, hypothermia in, [Inglis] 399—ab
liver, implantation metastasis after needle biopsy of, [Zelman] *682
malignant, ethylenemimine quinone for, Austria, 84; (for metastases) 2103
malignant, of retinopharynx, [Correa] 1885—ab
metastases, alkaline blood phosphatase in, [Melschke-de Jongh] 413—ab
of spinal extradural space, [Mullan] 399—ab
papillary, multiple superficial, of bladder, apparatus for intravesical Au^{198} in, United Kingdom, 88
pituitary, role of hypogonadism and hypothyroidism, [Vaughey] 1197—ab
Polypous: See Polyps
renal, polycythemia with, [Conley] 2006—ab
testicular, metastasis from, 2033
theca-cell and granulosa-cell, feminizing mesenchymomas with endometrial cancer, [Greene] 632—ab
transplantation techniques, N. Y., 170
treatment, hemipelvectomy, [Lewis & Rickel] *8
treatment, radiation, Austria, 85
Wilms': See Kidneys, tumors
TUNA FISH
allergy in infant, possible 2 days after eating? 198
TURKEYS
ornithosis-psittacosis transmitted from, [Graber] 1752—ab
TWINS
surviving, blood chimeras in, [Nicholas] 1200—ab
TYPHOID
in children, India, 1854
treatment, chloramphenicol and tetracycline, India, 1987
TYVID: See Isoniazid

U

ULCERS
decubitus, 1280—E
familial, mutilating lesions of extremities, and acro-osteolysis, [Bogaert] 2006—ab
of esophagus, stress, perforation after thermal burns, [Derrick] 882—ab
toe, in diabetic, treatment, 423
ULTRAN: See Phenaglycodol
ULTRASONUS
cause menstrual irregularities? 1225
irritation during administration of, prevention, 2140
treatment for pain in knees due to arthrosis or chondromalacia, Sweden, 1302
treatment of hematomas, Denmark, 721
ULTRAVIOLET RAYS
window glass filter out? 1355
UMBILICAL CORD
blood hemoglobin, reticulocytes and maternal antiglobulin titer in prognosis of hemolytic disease of newborn, [Kelsall] 1750—ab
UMBILICUS
hernia, transportation of newborn for surgery of, [Bishop] *1230
UNDULANT FEVER: See Brucellosis
UNITED MINE WORKERS OF AMERICA
county society to label doctor unethical unless he withdraws association with, 839
medical care program of Welfare and Retirement Fund, [Draper] 1184—C
Welfare and Retirement Fund, annual report on, 1040
UNITED NATIONS
International Children's Emergency Fund, health grants from, India, 867
UNITED STATES
Air Force: See Aviation, U. S. Air Force
Congress: See also Laws and Legislation, federal
Congress, report to, from Department of Defense on dependent's medical care, [Miscellany] *1475
Department of Civil Defense, establishment of, A. M. A. Committee annual report on, 988
government employees, dual vulnerability of, 1040
government employees, medical care for, annual report on, 1039
government, federal medical-health spending for 1958, 1996
government grant for research on traffic accidents at Northwestern U., 1063
government, liability involving physicians in, [Medicine and the Law] *2363
government, medical civil defense activities, A. M. A. annual report on, 1041
government, medical foreign aid programs, 954—E
government, medical services, A. M. A. annual report, 1037
government, priority in Asian influenza vaccine should not be controlled by, 1152—E
House of Representatives, medical school inquiry, 1401
Office of Defense Mobilization, Dr. Dearing appointed assistant director for health, 1289
UNIVERSITY
campus, chest diseases on, [Myers] 185—ab
of Alberta, heredity counseling at, Canada, 749
of Arkansas established new information office, 2105
of California Medical Center, Cardiovascular Research Institute established, 169
of Chicago, awards for statistics study, 856
of Cincinnati, establish Blankenhorn memorial research fund in internal medicine department, 850; (industrial medicine fellowships) 1065
of El Salvador, basic science teaching at, 376
of Florida, appoint director of surgery department, 1065
of Kansas medical library building dedicated, 1064
of Michigan, Commission on Influenza report on Asian influenza vaccination, *2055
of Missouri (cosponsors symposium on nutrition and pregnancy) 49; 57—E; 604—E; (grant for medical center) 1843
of North Carolina, grants for psychiatry program to, 2095
of Pennsylvania, (grant for mental health study) 1285; (graduate school revises curriculum) 1717
of Puerto Rico, (Medical School relocated) 851; (nuclear training center) 1285
of Texas Medical Branch, (medical sociology division established) 373; (muscular dystrophy clinic) 851
of Toronto study of general practice in Canada, 618
of Wisconsin, (Defense Department citation for cooperation with Reserve Program) 1717; (Respiratory Center activated) 1845
professional men, meeting in Paraguay, 1607
State U. of New York, grants to, 1976
UREA
as diuretic, United Kingdom, 1859
hydrochloride and quinine for persistent pain after hernia repair, (reply) [Watson] 612
URETEROSIGMOIDOSTOMY
rickets as sequel of, [Tobler] 1883—ab
URETHRA
catheterization, efficacy in determination of urinary infection, new technique, [Clabaugh & Rhoads] *815; 838—E
diverticulum, cause and treatment, 313
prostatic, dilatation, Finland, 1985
surgery, nomenclature interpretation of internal urethrotomy, 200
URETHRITIS
acute hemorrhagic cystitis with pleuropneumonia-like organisms related to, [Berg] 302—ab
senile, in women, [Youngblood] 2234—ab
URINARY SYSTEM
calculi, surgical complication of pregnancy, [Barter & Rovner] *317
calculi, urinary glucuronide effect on formation, [Vermeulen] 302—ab
infection, postoperative, [Harris] 2220—C
infection, rapid method of determining, [Doolittle & Cohen] *1291
infection, urethral catheterization to determine, [Clabaugh & Rhoads] *815; 838—E
injuries, severe, care of, [DeWeerd] *1916
URINATION
enuresis in teen-agers in boys' home, hazard of ephedrine sulfate for, 118
frequent, in recurring infectious thrombophlebitis, 164:1857, Aug. 17, 1957: (correction) 165:711, Oct. 12, 1957
incontinence, anticholinergic drugs for, [Bertolotto] 2236—ab
URINE
Albumin in: See Albuminuria
Amino Acids: See Aminoaciduria
Blood in: See Hematuria
calcium, calciuria as indicator of efficacy of hormones in metastasized breast cancer, [Gerbrandy] 1500—ab
catecholamines in differential diagnosis of essential hypertension and pheochromocytoma, [Henry] 1869—ab
citric acid in diagnosis of renal function, [Otto] 1743—ab
colloidal properties, method of investigating protective action of, United Kingdom, 89
Cystine in: See Aminoaciduria
erythrocytes one year after acute hemorrhagic glomerulonephritis significant? 1769
female, nature and origin of mammotrophic agent in, [Haddield] 193—ab
ferric chloride test in diagnosis of phenylketonuria, [Centerwall] 392—C; 2219—C
ferric chloride test; mechanism; positive in phenylketonuria, leukemia and what other diseases? 200
Glucose in: See Glycosuria
beta-glucuronidase in cancer, United Kingdom, 88
glucuronide, effect on solubility of calcium phosphate and stone formation, [Vermeulen] 302—ab
Glycine in: See Aminoaciduria
in rat, technique of assay during normotensive phase in pheochromocytoma, [Masson & others] *1555
lead, after monocalcium disodium edathamil in saturnism, [Salvini] 905—ab
N¹-methylnicotinamide, cyanocabalamin effect on, India, 1070
oxalate, primary hyperoxaluria, [Archer] 2017—ab
Porphyrin in: See Porphyria
Protein in: See Albuminuria
staining, dark and rust-like, diagnosis, 1358
Sugar in: See Glycosuria
uric acid ratio to creatinine; epinephrine, ACTH and cortisone effects on compared, India, 867
uropepsin excretion, clinical disorders and drugs effect on, [Corazza & Myerson] *116
UROGRAPHY
reaction to contrast medium, fatal intra-abdominal hemorrhage simulating, [Counts & others] *1134
UROKON: See Acetrizoate, Sodium
UROLOGY
aortography in, Austria, 164:1000, June 29, 1957; (correction) 165:1846, Dec. 7, 1957
UROPEPSIN
excretion, clinical disorders and drugs effect on, [Corazza & Myerson] *116
URTICARIA
allergic dermatosis, [Rostenberg] *1118
pigmentosa, mast cell leukemia presenting as, [Waters] 407—ab
UTERUS
cervix, retained, [Cariker] 1334—ab
intrauterine pessaries hazards, [Weilerstein] 296—*
Mucosa: See Endometrium

UTERUS Continued
prolapse with rectocele and cystocele, surgical procedure for, 1355
surgery, endometriosis in vaginal scar after hysterotomy for therapeutic abortion, [Gottlieb] 192—ab
UTERUS CANCER
adenocarcinoma, India, 273
choriocarcinoma, [Groseclose] 297—ab
diagnosis: Time and Two Women, (Illustrated Film Review) [Meigs] *729
in extremely obese patient, treatment, 1359
of cervix, exfoliative cytology in diagnosis, [Dale] 632—ab
of cervix in young women, [Grattarola] 1198—ab
of cervix, influence of selected factors on morbidity, [Dougherty] 2013—ab
of cervix, intraepithelial, cytology and cone biopsy in, [Fidler] 1334—ab
of cervix, intraepithelial (stage 0): diagnosis and management, [Parker] 1197—ab
of cervix (invasive), cytohistology, [McCormack] 2023—ab
of cervix, preclinical, [Latour] 1335—ab
of cervix, prognostic significance of glandular involvement in cold knife conization biopsies in, [Baker] 105—ab
of cervix, routine smears in detection in pregnancy, [Slate] 1334—ab
of endometrium, feminizing mesenchymomas with, [Greene] 632—ab
of endometrium, lavage in diagnosis of, [Morton] 295—ab
of endometrium, surgery alone for, [Sandberg] 296—ab
of fundus, preoperative radiation for, 2110
UVEITIS
treatment, [Nielsen] 635—ab

V

V-CILLIN: See Phenoxymethyl Penicillin
VACCINE: See also Biologic Products; and under specific diseases as Influenza; Poliomyelitis; etc.
prophylaxis for micrococcic and streptococcic infections, 911
VACCINIA
gangrenosa and agammaglobulinemia, [Somers] 633—ab
VAGINA
candidiasis, identification, therapy, [Pickhardt] 757—ab
fungous infection, treatment, 199
scar, endometriosis in, after hysterotomy for therapeutic abortion, [Gottlieb] 192—ab
smear to detect changes in cytology in threatened abortion, India, 179
VAGOTOMY: See Nerves, vagotomy
VALLESTRIL: See Methallenestril
VALVULOTOMY: See Mitral Valve
VANADIUM
poisoning in oil-fired boilers, United Kingdom, 723
VARICELLA: See Chickenpox
VARIDASE: See Streptokinase-Streptodornase
VASOMOTOR SYSTEM
peripheral function in cretinism, [Bower] 1883—ab
VASOPRESSOR AGENT
therapeutic implications in carotid and basilar artery thromboses, [Shanbrom] 2012—ab
VECTOCARDIOGRAM: See under Heart
VEINS
femoral, vs. heart for postmortem alcohol determinations, (replies) [Harger] 725; C; (medicolegal problems) [Muehlberger] 726; C; [Turkel & Gifford] 1993; C
inferior mesenteric and gastric ligature, plus splenectomy in portal hypertension, Brazil, 1853
Inflammation: See Phlebitis
pulmonary, drainage of right lung into inferior vena cava with malrotation of heart, [Steinberg] 2135—ab
pulmonary, right, anomalous connection to superior vena cava with interatrial communications, [Swan] 1183—ab
roentgen study, costal intraosseous, to diagnose portal hypertension, [Schobinger] 2222—ab
VENA CAVA
inferior, anomalous pulmonary venous drainage of right lung into, with malrotation of heart, [Steinberg] 2135—ab
inferior, management of penetrating wounds of, [Starzl] 883—ab
inferior, thrombosis in childhood, [Liddle] 1340—ab
superior, anomalous connection of right pulmonary veins to, with interatrial communications, [Swan] 1183—ab
VENEREAL DISEASE
control, close houses of prostitution in Japan, 1072
in teenagers, pilot study, Mo., 1158
prophylaxis after exposure to, 914
VENOM: See Snakes
VENTRICULAR FIBRILLATION
after open heart surgery, [Keown & others] *781
cardiac monitor to detect and differentiate during surgery, [Simpson] 748—ab
electric defibrillation, epicardial burns relation to late mortality in, [Kortz] 400—ab
VERAZIDE
related hydrazones and, antituberculous activity of, [Rubbo] 2235—ab
VERRUCA
intractable plantar warts, treatment, [Anderson] 1637—ab
VERRUGA PERUANA
homage to D. A. Carrión who proved Oroya fever has same etiology, Peru, 1622
VERSENATE: See Edathamil
VERTEBRAE: See Spine
VERTIGO
differential diagnosis, [Hoople] *1943
VETERANS
affairs, A. M. A. Committee annual report, 987
compensation increased, 712
Nonveterans and, 2 Classes of Citizens? new A. M. A. publication, 2092
VETERANS ADMINISTRATION
Dr. Chamberlain heads V. A. atomic medicine, 857
"Hometown" medical care, A. M. A. annual report on, 1039
Hospitals: See Hospitals
long-term patients, vocational guidance program, 78
program, mental hospital as therapeutic community, 78
rehabilitation of paraplegics, pamphlet on, 173
studies of survival in miliary and meningeal tuberculosis, [Williams] 2235—ab
study of fungus pulmonary diseases, 78
training in occupational therapy, 379
undergraduate and graduate medical training in, 1451
workmen's compensation cases and, annual report, 1038
VETERINARY CORPS
action to eliminate, A. M. A. annual report on, 1009
VIBRATION
sense in aged, Canada, 1173
VINACTANE: See Vionycin Sulfate
VIOCIN: See Vionycin Sulfate
VIOMYCIN SULFATE
treatment of tuberculosis of lung, [Naegeli] 1210—ab
treatment plus oxytetracycline in pulmonary tuberculosis, [Pines] 410—ab
VIRILISM
is "pega palo" the answer? [Bureau of Investigation] 695
VIRUS
AD: APC: ARD: RI: See Adenovirus
changing status of virological diagnostic services, [Cheever] *2059
Coxsackie: See Coxsackie Viruses
disease, antibiotics in, 53; E
Hepatitis: See Hepatitis, Infectious
isolation in Behçet's syndrome, [Evans] 2012—ab
isolation of trachoma in chick embryo, [T'ang] 1207—ab
meningitis, 7 cases in one family, Canada, 1172
mumps, and subacute thyroiditis, Israel, 722
pneumonia, [Carotti] 1315—ab
VISCERA
manifestations of occlusive disease of intestinal blood vessels, [Pratt] 2230—ab
VISION
in industry, A. M. A. cosponsors session at National Safety Congress, 354
loss after commissurotomy for mitral stenosis, [Alfano] 1642—ab
loss of, caused by exposure to chlorine gas; 1360
VITAL CAPACITY
determination, [Worton & Bedell] *1652
pulmonary function, India, 1986
VITAL STATISTICS
birth statistics, Miss., 1975
case registry for rheumatic fever and glomerulonephritis, [Saslaw] *1129
5-year median, explanation of term, 765
incidence of disseminated lupus erythematosus increased, [Svanborg & Sölvell] *1126
influenza morbidity and mortality, 1953-56, United Kingdom, 871
morbidity census in general practice, Denmark, 1298
morbidity in Goiaz, Brazil, 1170
mortality from arteriosclerosis, Sweden, 1624
mortality from cancer, Japan, 723
mortality from liver cirrhosis, 285
mortality from tuberculosis rises, Mich., 2093
mortality in diabetes, [Montenero] 1081—ab
Mortality, Infant: see Infants: Stillbirth
Mortality, Maternal: See Maternity
United Kingdom, 1303
VITAMINS
manufacture of, India, 1856
VITAMINS A
high doses, thyroidal depression following, [Logan] 1644—ab
VITAMINS B COMPLEX
B_2: See Riboflavin
B_{12}: See Cyanocobalamin
estrogens with, in oral cancer, India, 1471
in management of regional enteritis, [Bargen] *2045
VITAMINS C: See Ascorbic Acid
VITAMINS D
D_2: See Calciferol
in dried milk and cod liver oil reduced, United Kingdom, 2217
significance in therapy of tuberculosis, [Holtz] 1497—ab
VITAMINS E
prevent congenital anomalies with, [Shute] 634—ab
VITAMINS K
in management of regional enteritis, [Bargen] *2045
K_1: See Phytonadione
routine use, rationale in obstetrics, 911; (replies) [Quick; and original consultant] 2246
treatment of delayed blood coagulation? 1224
VITREOUS
hemorrhage into, India, 1174
VIVISECTION: See Animal Experimentation
VOCATIONAL GUIDANCE: See Industrial Health
VOMITING
reflex, after fatty meal, 421
stercoraceous, diagnosis, treatment, 1360
VULVA
cancer, [Isaacs] 106—ab
cancer, factors that might influence prognosis, [Cassidy] 1335—ab
malignant Paget's disease, [Woodruff] 886—ab

W

WBGT: See under Thermometers
WAGES
internship stipends, 456
resident stipends (maximum) in V. A., 1453
WALKER, J. W., first physician to be refunded tuition under doctor for community program, 352; E; 355
WAR
feeding, health program on, India, 180
WARFARIN SODIUM
clinical observations on use, [Fremont & Jagendorf] *1381
intramuscular administration, [Shapiro & Ciferri] *1377
WARTS: See Verruca
WASHINGTON
Office: See American Medical Association
WATER
diuresis, cortisone and hydrocortisone effects on, [Raisz] 398—ab
fluoridation, A. M. A. policy on, 2090
fluoridation, Joint Committee on Fluoridation, annual report on, 1000
fluoridation ruled illegal, Canada, 623
fluoridation to control teeth caries, N. Z., 1072
nitrite poisoning of babies, United Kingdom, 1994
pollution, contaminated beaches, United Kingdom, 391
rain, collected off asbestos shingles, danger from using, 1089
soluble contrast mediums, nonabsorbable, in diagnosis of intestinal obstruction, [Epstein] *84
tolerance test, India, 387
WAYNE STATE UNIVERSITY
gifts and grants, Mich., 849
plans to increase number of medical students, 1842
scholarship to Cuban physician to study internal medicine, 377
WEATHER
heat casualties, prevention, [Minard & others] *1813
WEIGHT: See Body weight, Obesity
WELDING
arc welders' lungs, United Kingdom, 1859
WELFARE: See Public Welfare
WELFARE STATE: See Socialism
WEST VIRGINIA UNIVERSITY
Basic Sciences building dedicated, (photo) 374
loans Oak Ridge Institute, 1977
WESTERGREN Sedimentation Rate: See Blood sedimentation
WHEAT
germ, unsaturated fatty acids, and prevention of atherosclerosis, 111
WHEEZING
asthmatic, tracheal and major bronchial compression causes, [Dekker] 185—ab
WHIPWORM: See Trichuriasis
WHOOPING COUGH
diphtheria immunization with, United Kingdom, 871

V 16
1957

WHOOPING COUGH—Continued
treatment, colimycin, [Lanza] 2236—ab
WILMS' Tumor: See Kidneys, tumors
WILSON'S DISEASE: See Lenticular Nucleus, hepatolenticular degeneration
WINE
international congress on, France, 377
WINTER fun, A. M. A. radio transcriptions, 1832
WOMAN'S AUXILIARY
cooperate with legislative organization of, 987
report to A. M. A., 1048
WOMAN'S MEDICAL COLLEGE
cancer research at, 708
first Afghan woman doctor enrolls as special student, 1717
WOMEN
blood pressure in, India, 1734
Physicians: See Physicians
WORK; WORKMEN: See Industrial Health
WORKMEN'S COMPENSATION
Acts: See Medicolegal Abstracts at end of letter M
cases, and V. A., annual report, 1038
medicine program, N. Y., 373
WORLD Conference on Medical Education, second, in 1959, 1404; 1832

WORLD MEDICAL ASSOCIATION
activities, world medicine comes of age, (Medicine at work) [Golin] *49
A. M. A. activities in, 977
elects officers, 2092
WORLD WAR II (1939-1945)
U. S. Army Medical Department in, history of history series of books, [Coates] *241
WOUNDS
cicatrization, effect of desiccated red corpuscles on, [Gilles] 1323—ab
cleaning dirt and cinders from, 2034
evisceration, postoperative, in gastric perforation in newborn, [Abramson] 2124—ab
infections, postoperative staphylococcic, [Howe] 2122—ab
penetrating gunshot, of inferior vena cava, management, [Starzl] 883—ab
surgical, sepsis in, especially Staphylococcus aureus, [Clarke] 884—ab
WRESTLING
National Wrestling Association, Dr. Ward Wylie becomes member of executive committee of, W. Va., 1160
WYDASE: See Hyaluronidase

X-Z

XANTHOMATOSIS: See Niemann-Pick Disease
YALE UNIVERSITY
Library receives 300-year-old book: "Tractatus de Corde," 1714
YAWS
like disease, India, 1734
YEAST
increased frequency of Torulopsis glabrata infections, identification, [Wickerham] *47
YELLOW FEVER
virus in Panama, 618
YOUTH: See Children
YPERITE: See Nitrogen Mustards
ZINADOX: See Isoniazid
ZONDEK, HERMAN, 70th birthday, Israel Medical Association devotes meeting to endocrinological research, 1071
ZOONOSES
"Animal Diseases and Health," conference report, N. Y., 170
ZOXAZOLAMINE
treatment, and/or chlorpromazine for muscle spasm, [Gibson & others] *18
treatment of cerebral palsied children, evaluation, [Watkins & Hale] *830

AUTHOR INDEX

The asterisk (*) indicates an original article in THE JOURNAL.

For subject index see page 3.

A

Aarskog, D., 1881
Abadie, S. H., *2063
Abeshouse, B. S., 893
Abramson, D. J., 2124
Adams, J. T., *1563
Adams, R., *31
Ahumada, J. C., 193, 1198
Albers, D. D., 1320
Alfandary, L., 754
Alfano, J. E., 1207, 1642
Allanby, K. D., 412
Allen, J. E., 1200
Allman, D. B., *353, *1055, *1571, *1701, *2199
Alman, R. W., *1241
Altemeier, W. A., 291
Andersen, T., 1887
Anderson, A. E., 102
Anderson, R., *1922, 1637
Andrews, G. C., *1114
Angela, G. C., 885
Anthony, S. O., *2063
Apgar, V., *2155
Aquinas, Sister M., 2027
Archer, H. E., 2017
Armas Cruz, R., 897
Arnett, N. L., 2025
Astrup, P., 285
Atabek, A. A., 395
Aubuchon, L., *1256
Aun, R. A., 2018
Austin, M. G., 1756
Avery, M. E., 407
Azar, H. A., 2021
Azevedo, A. C., 1315

B

Bacchi, A., 898
Baggenstoss, A. H., *1099
Bagnall, A., 1888
Bahnson, H. T., 631
Bailey, C. P., 100, *781
Bailey, D., 2224
Baily, R. A. J., 1211
Baker, K. C., 1203
Baker, W. S., Jr., 105
Baldwin, W. F., 1748
Ballistocky, M. H., 107
Balke, B., 905
Balme, R. H., *76
Balthrop, E., 405
Banks, B. M., 735
Barber, J. R., 746
Barboni, F., 304
Barbour, C. M., *1529
Bardelli, S., 1643
Bargen, J. A., *2045
Baronofsky, I. D., 2009
Baroody, N. B., *31
Barr, J. H., Jr., *13
Barrett, O., Jr., 1194
Barrett, W. A., 1884
Barrie, H. J., 2022
Barsky, P., 1747
Barter, R. H., *317
Barth, E. E., 2108
Bartholomew, R. A., 632
Barton, J., *675
Bashour, F. A., *922
Bassi, M., 398
Bate, J. T., *153
Battarino, P., 296
Baumann, T., 2026
Baxter, J. H., *1798
Bayer, O., 286
Beasley, A. R., 1860
Becattini, U., 1345
Beck, C. S., 630
Becker, W. F., 744
Beckett, D. W., 890
Bedell, G. N., *1652
Bedford, D. E., 1189
Belding, H. S., *1813
Bell, J. A., *1366
Bembenista, J. K., *1114
Benevolo, A., 109
Benford, R. J., 91
Bennett, G., 1888
Bennet-Jones, N., 1322
Benson, C. D., 2120
Berg, R. L., 302
Berg, R. M., 306
Bergamini, A., 1321
Berger, E., 191
Bergsjø, P., 886
Bergsmann, O., 2127
Berlyne, G. M., 1336
Berman, A. M., 2019
Berman, H. H., 2233
Berman, J. K., *1537
Bernardi, R., 1753
Bertolotto, R., 2236
Bertoni, L., 1187
Bertoye, P., 1200
Beveridge, J., 1202
Bickel, H., 108
Bickel, W. H., *8
Bickerstaff, E. R., 755
Bickford, R. J., 1191
Bigler, J. A., *1563
Binder, S. S., *154
Bird, R. M., 1320
Birnbaum, S. J., *2163
Bishop, H. C., *1230
Bistowish, J. M., 1890
Björk, V. O., 102
Black, G. E., 1749
Blackfield, H. M., 1637
Blair, E., 417
Blaisdell, P. C., *1392
Blake, E. L. D., 2220
Blalock, J., 2121
Bleyer, J. M., 904
Blount, S. G., Jr., 187
Bluestone, S. S., *18
Blumenstock, D. A., 107
Bogaert, L. V., 2006
Boger, W. P., *1687
Boggs, T. R., Jr., *1237
Bohn, C. L. S., 1193
Bolgert, M., 1498
Bolletti, M., 1337
Bollman, J. L., 1878
Bonica, J. J., *2146
Bookman, R., *1950
Boquien, Y., 414
Borden, F. W., 1746
Borri, M., 1330
Bosma, J. F., *216
Boudin, G., 305
Bowen, R., 1509
Bower, B. D., 1883
Bowers, R. F., 752
Braceland, F. J., *211
Braley, A. E., 634
Breckinridge, E., *1965
Breed, J. E., 2025
Brickman, H. R., *339
Brinkman, G. L., 1081
Brittingham, T. E., *849
Brockhaus, J., 1330
Brofman, B. L., 630
Brosset, A., 192
Brown, E. M., *947
Brown, J. A. K., 2027
Brown, K. L., *643
Brown, S. F., *2178
Bruce-Chwatt, L. J., 1345
Brunschwig, A., 1502
Brunson, J. G., 877
Brusadelli, S., 1186
Brussel, J. A., 2220
Bruun, E., 1210
Bryan, W. T. K., 894
Bryant, J. M., *281
Bryant, M. F., 1210
Buchholz, J. H., *778
Buckwalter, J. A., *327
Bukantz, S. C., *1256
Bull, G. M., 1499
Bunch, L. D., 2006
Burch, G. E., *1274, *1781
Burke, D. H., *1270
Burke, R. M., 877
Burn, J. I., 1753
Burney, L. E., *140
Burstein, J., 876
Burton, C. C., 1501
Buser, P., 2009
Bustamente y Rivero, J. M., *829
Bynum, W. T., 1493

C

Cachin, M., 1086
Caini, B., 113
Calderone, M. S., 2220
Caldwell, J. R., *1823
Calvert, R. J., 1491
Cambler, J., 103
Campbell, M., 881
Canary, J. J., 2126
Cann, H. M., 1994
Cannon, J. A., 1506
Cantoni, L., 1746
Carcassi, U., 1871, 2225
Cardone, U., 738
Carliker, M., 1331
Carotti, A., 1315
Carpent, G., 741
Carrington, E. R., 294
Carstensen, E., 2123
Carter, A. B., 1330
Carter, F. H., Jr., 1508
Carvalho, N., 2026
Cassady, J. R., 2019
Cassidy, J. E., 637
Cassidy, R. E., 1335
Caughey, J. E., 1197
Cawley, L. P., 2132
Caygill, W. M., *1131
Ceccarelli, G., 188
Centerwall, W. R., 392, 2219
Cerri, S., *346
Chalnot, P., 742
Chandler, P. A., 106
Chaplin, H., Jr., *819
Chapman, J. S., *927
Charache, H., 1501
Chase, G. O., *1826
Cheever, F. S., *2059
Ch'en, M. C., 1638
Ch'en, W. C., 406
Chesky, V. E., 2021
Chieffo, H. D., 733
Childs, D. S., *1545
Chin, E. F., 1189
Christensen, W. R., 1610
Chung, H.-L., 185
Churchill-Davidson, H. C., 898
Ciferri, F. E., *1377
Clabaugh, G. F., *815
Clarke, B. K. R., 884
Clausen, E. G., 2121
Cleland, W. P., 1337
Clifford, S. H., *1663
Cloward, R. B., 289
Coates, J. B., Jr., *241
Coates, S., 1882
Cohen, A., *225
Cohen, F. B., 1871
Cohen, J. R., *1391
Cohn, I., 2230
Cole, F. *149
Coleman, M., *2178
Collier, F. C., 2227
Collings, H., Jr., 2232
Collins, E. N., *2042
Combrisson, A. G., 1213
Compere, E. L., *2070
Conley, C. L., 2006
Conley, J. J., 895
Contreras, R., 2131
Conway, J., 732
Cooley, D. A., 101, 630, 1082, 1502
Cooper, J. A., 1211
Cooper, P., *1270
Cope, J. A., 1746
Cope, O., 744
Copeman, W. S. C., 880
Corazza, L. J., *146
Corcoran, A. C., *1555
Corff, M., 1502
Correa, A., 1325, 1885
Corsini, F., 2233
Costello, M. J., *1249
Cottler, P. T., 1743
Counts, R. W., *1134
Courville, C. B., 754
Coventry, M. B., 1195
Cowling, D. C., 1318
Cox, H. T., 189
Craig, J. W., 411
Crandell, D. L., 416
Crawford, A. S., 753
Crawford, W. J., 1081
Creech, O., Jr., 2128
Crissey, J. T., *1526
Cristiani, G., 883
Crockett, J. E., *1953
Croft, C. R., 1643
Cross, F. S., 101
Crossland, P. M., *647
Cuccia, D., 1503
Culver, J. O., *2174
Culver, P. J., 2118
Curcio, F., 307
Curtarino, G., 2134
Curtis, J. K., 741
Cuthbert, J., 1887

D

Dacso, M. M., *360
D'Agata, A., 1887
Dale, E. H., 632
Dalgard, O. Z., 1754
Dalton, K., 2013
Dameshek, W., *28
Daniel, D. S., 1205
Dannenbaum, P., 758
Dannenberg, M., *1249
Danowski, T. S., 194
Dao, T. L., *1793, 2121
Das Gupta, B. K., 409
Davis, B. C., 402

Davis, G. M., *222
Davis, J. S., 1498
Daws, R. A., 880
de Alvarez, R. R., 1878
De Bakey, M. E., 1499
Debré, R., 1190
Decker, H. R., 1178
Dedrick, J. W., 99
DeFilippis, V., 1085
DeFriez, A. I., *1760
Dekker, E., 185
de Medeiros, A., *767
de Moragas, J. M., *1936
Denny, F. W., Jr., *667
Derbes, V. J., 1341
de Roetth, A., Jr., *144
Derra, E., 290
Derrick, J. R., 882
Destunis, G., 2133
Dettori, A. G., 896
Devins, G. V., *241
DeVore, J. W., 1869
de Vries, A., 2234
DeWall, R. A., *1788
DeWeerd, J. H., *1916
DeWeese, M. S., 1872
Diaz Cano, M., 1346
Dimmick, E. L., 1305
Dische, F. E., 1493
Dobias, B., 2123
Dohan, F. C., *322
Doherty, R. L., 418
Doll, R., 1211, 2230
Domonkos, A. N. *1114
Donohoe, R. F., 740
Donohue, W. L., 2014
Doolan, P. D., 2222
Doolittle, L. H., *1391
Dordick, J. R., 898
Dormandy, K. M., 1349
Dorney, E. R., 1077
Dougherty, C. M., 2013
Douglas, A. C., 1633
Douglas, R. G., *2163
Dowd, B., 194
Dowling, H. F., *657
Draper, W. F., *1484
Dreiling, D. A., 2118
Dressler, H., 873
Drevets, C. C., 1494
Dripps, R. D., *795
Droese, W., 190
Dublin, T. D., *1808
Dundon, S., 300
Dunn, J., Jr., 1213
Durant, T. M., 2024
Durlez, J., 1328
Dustan, H. P., *1521
DuVal, M. K., Jr., 288

E

Eastman, G. L., 303
Eddy, N. B., 91
Edeiken, J., 1183
Edmunds, P. N., 1507
Edwards, G., 1889
Edwards, H. K., 1860
Eggink, F. A., 1639
Ehrmantraut, W. R., *1241
Eiseman, B., 291
Eisenbeis, C. H., Jr., *13
Elliott, H. J., 1886
Ellis, K., 2024
Emanuel, M., 1204
Engberg, H., 1341
Engelsher, D. L., 278
Epstein, B. S., *44, *679
Epstein, J. A., *679
Epstein, J. H., 1638
Ernstene, A. C., *1110
Ettman, I. K., 415
Evans, A. D., 2012
Everett, M. A., 1080

F

Faber, V., 629, 1185
Farrel, J. J., 882
Fazekas, J. F., *1241
Feigin, I., 404
Felks, F. K., 1496
Feinberg, A. R., *1560
Feinberg, S. M., *1560
Fellmann, H., 1078
Fentress, V., *21
Feraru, A., *1388
Ferguson, J. T., *1677
Ferguson, L. K., *2048
Ferguson-Smith, M. A., 2237
Fernández, G. J., 105
Ferrier, T., 1079
Ferris, D. O., 1505
Fessey, B. M., 2007
Fetter, S. E., *1233
Fidler, H. K., 1334
Field, J. B., 412
Fields, D. C., *1537
Fink, A. J., 1084
Finnerty, F. A., Jr., *778
Fischer, J. W., 397
Fischermann, E., 760
Fisher, E. R., 899
Fisherman, E. W., *1560
Fitz, T. E., 1079
Fixsen, C., *138
Fleischmajer, R., *1821
Fleisher, G. A., *1936
Flinn, J. H., *234
Flosi, A. Z., 2005
Follmann, J. F., Jr., *1578
Foote, E. L., 1319
Forbes, S. B., 1206
Foundeur, M., *138
Fowler, F. D., 2120
Fox, R. E., 1208
Fraisse, 1086
Fraser, K., 882
Frayer, W. C., 2235
Freeman, J. T., *843
Freier, S., 303
Fremming, B. D., 2133
Fremont, R. E., *1881
Friederiszick, F. K., 1342
Friedman, I. A., 285
Fries, J. H., *1542
Friese, G., 286
Frolow, G. R., 1509
Fry, A., 294
Frye, W. W., *2063
Fuller, C. O., 1871

G

Gagliardi, R. A., 1349
Gallardo, E., 2234
Gamalero, P. C., 1201
García Blanco, A., 753
Garret, M., 2219
Gaspar, M. R., 2025
Gatchell, F. G., 2021
Gaylis, H., 1187
Georgesco, M., 879
Gerbrandy, J., 1500
Geyer, R. W., 2232
Giaquinto, M., 1318
Gibbons, T. B., 628
Gibson, J. W., *18
Gifford, H., 1993
Gilbert, A. E., 305
Giles, H. M., 633
Giles, H. V., 1323
Gilman, R. A., *781
Giordano, C., 2236
Giordano, L., 743
Giraud, P., 402
Githens, J. H., 1085
Glass, G. B. J., 1870
Glover, D. M., *643
Godoy Moreira, F. E., 1329
Goffrini, P., 189
Goldbloom, R. B., 1751
Goldman, J., *225
Goldman, L., 2018, 2120
Goldring, D., 1203
Golin, M., *19, *1145, *2084
Gomensoro, J. B., 1324
Gontijo, B., 752
Goodman, H. C., *1798
Gottlieb, T., 192
Graber, R. E., 1752
de Graciansky, P., 636
Grattarola, R., 1198
Green, O. C., *1563
Greenberg, J. R., *348
Greenberg, M., *675
Greene, J. W., Jr., 632
Greene, W. W., 1506
Gregg, L. A., *1899
Gregory, I. D. R., 759
Gronbeck, C., *667
Groseclose, E. S., 297
Gross, J. B., 1320
Grosskreutz, D. C., *949
Grossman, B. J., 298
Grumbach, M. M., 900
Gruskay, F. L., 1508
Gubler, C. J., 1636
Guillaudeu, R. L., *788
Guillaume, J., 187, 399
Gund, A., 1190
Gunson, H. H., 1199
Gustavson, S., *96

H

Haag, H. B., *451
Habegger, E. D., *1537
Habel, K., 1759
Hadfield, G., 193
Halasz, N. A., 305
Halbrecht, I., 888
Hale, D. E., 307
Haie, M. H., *830
Hallberg, O. E., *1619
Hallenbeck, G. A., 748
Haller, J. R., 1885
Hallman, N., 1194
Hallock, H., 745
Halpert, B., 2131
Hamel, N. C., 1503
Hammack, W. J., *24
Hanger, F. M., *1696
Hanson, A., 1315
Hardin, C. A., 1326
Hardy, A. V., *1808
Harger, R. N., 725
Harper, P. A., *1233
Harris, H. J., 2220
Harrower, H. W., *1270
Harvey, J. C., *1
Harvey, W. P., 1495
Harwood, R., 1499
Havard, C., 1190
Havens, W. P., Jr., *1091
Haynie, T. P., 100
Hebert, W. M., 2010
Hecht, A., 410
Hedgepath, L. E., *915
Heilmeyer, L., 1185
Heinbecker, P., 749
Heine, F., 742
Heinrich, F., 289
Heinsius, E., 891
Heinz, R., 184
Heise, H. A., 1739
Henckel, H., 404
Hendrick, J. W., 1500
Henríquez, E., 756
Henry, R. J., 1869
Hierons, R., 755
Hilkovitz, G., 1889
Hilleman, M. R., 1755
Hindmarsh, F. D., 744
Hinman, J., *453, *1393
Hirsch, E. F., *2187
Hirsch, S., *452
Hitchcock, C. R., 752
Hodges, C. V., *1905
Hoerner, E. F., *150
Holaday, D. A., *2155
Holladay, W. E., Jr., 2008
Holland, R. H., *1819
Hollander, V. P., 295
Hollé, F., 1745
Holze, H. A., *164
Holowach, J., 299
Holtz, F., 1497
Homma, H., 288
Honey, G. E., 629, 629
Hoobler, S. W., *2143
Hood, M., 2023
Hooper, A. D., 1212
Hoople, G. D., *232, *1943
Horan, J. C., *1592
Horlick, L., 1317
Horner, F. A., 299
Hosford, J., 188
Hottinger, A., 1882
Howard, N., 1758
Howe, C. W., 2122
Howlett, J. G., 875
Hsia, D. Y-Y., 757
Hudson, B., 1185
Huebner, R. J., *1366
Huggins, C., *1793
Hughes, W. L., 736
Humphrey, D. C., *1555
Hunnicutt, T. N., Jr., 1633
Hurford, J. V., 303
Hurtig, A., 191
Hutchison, J. H., 2017
Hwang, W., 2117
Hyland, H. H., 753

I

Ikefugi, A. W., *826
Imes, C. H., 756
Inglis, J. M., 399
Invernizzi, G., 881
Irwin, P. C., *1574
Isaac, F., 115
Isaacs, J. H., 106
Israel, H. L., 1078, 1744

J

Jablokow, V., *1277
Jackson, A. S., *121, *1533
Jackson, R. C., 101
Jacobs, J. H., 752
Jacobziner, H., 299, *1669
Jacquelin, A., 1643
Jagendorf, B., *1381
Jaimovich, L., *1249
James, L. S., *2155
Janson, P., 759
Jarnlou, A. P., 1743
Jennings, E. R., 414
Jeune, M., 633
Johnson, J. B., *915
Johnsson, S., 1319
Johnstone, F. R. C., 288
Jokl, E., *129
Joly, H., 1192
Jones, W. F., 414, 2237
Jordan, P. H., Jr., 402
Jordon, J. W., *1526
Jorke, D., 2223
Josey, W. E., 405

K

Käser, H., 891
Kalpainen, W. J., 2008
Kaltreider, D. F., *132
Kaminsky, A., 2018
Kanenson, W. L., *225
Kaplan, M., 1331
Kassel, V., 1488
Katz, R., 301
Kaufman, B. H., 2132
Kay, E. B., *2168
Kaye, S., *151
Keedy, C., 881
Keegan, J. M., *1665
Kellock, T. D., 2225
Kelsall, G. A., 1750
Keminger, K., 747
Kemp, E., 755
Kendall, E. J. C., 1498
Keown, K. K., *781
Kern, F., 1742
Kiesewetter, W. B., 758
Kilmer, W. L., *1537
Kincaid, O. W., 2134
Kinmonth, J. B., 2232
Kingston, J. R., *1813
Klemes, I. S., 636
Klumpp, T. G., *605
Klunker, V. W., 635
Knights, E. M., Jr., *1277
Knobloch, H., *1233
Knowler, L. A., *327
Koch, R., 1083
Kohl, S. G., *1659
Kolstad, P., 192
Konugres, B., *150
Koppanyi, T., 739
Kornzweig, A. L., 1642
Kortz, A. B., 400
Kory, R. C., *418
Koster, L., 1321
Kottke, F. J., *1930
Kozinn, P. I., 1083
Kramer, D. W., *767
Krejci, J. J., 1324
Krönke, E., 733
Kroop, I. G., *1245
Krueger, V. R., 1316
Kulda, H., 2007
Kulczycki, L. L., 1338
Kummer, A., 1641
Kuntz, E., 1346
Kupriyanov, P. A., 398
Kushner, D. S., *1690, *2193
Kyle, L. H., 1344

L

LaDue, J. S., *1776
Ladwig, H. A., 403
Laforest, R. A., 888
Lalpply, T. C., *2052
Laittinen, H., 1348
Lampert, R., *2063
Langeland, B., 892
Langlet, J. F., 745
Lanza, I., 2236
Larmon, W. A., *1865
Laron, Z., 1338
Lasagna, L., 91
Lassen, N. A., 2224
Last, P. M., 731
Latour, J. P. A., 1335
de Lavergne, E., 898
Lawlah, J. W., *915
Leary, D., 1198
Lederer, L. G., 1487
Lee, G. deJ., 396
Lee, P. R., *787; *791
Lee, R. V., *805
Lefemine, A. A., 1186, 1328
Leban, P. L., 287
Lehman, T. H., *1905
Lehmann, H., 404
Lelièvre, J., 760
Lemere, F., 1861
Lempert, J., *229
Lennette, E. H., *2174
Leonard, A. S., *1957
Lepley, E., Jr., 1876
Leprat, J., 184
Levine, R., 411
Levitt, J. M., *1955
Lewis, A. E., *348
Lewis, F. J., *922
Lewis, G. W., 107
Lewis, L. A., 2239
Lewis, R. C., Jr., *8
Liddell, D. W., 292
Liddle, W. D., Jr., 1340
Liebman, S. D., 1642
Lightwood, R., 300
Lillehei, C. W., 1788, 2228
Lillington, G. A., 1181
Lindquist, B., 1337
Lindskog, G. E., 1319
Lippmann, R. K., 1196
Lipton, E. L., 298
Little, D. M., Jr., *1529
Little, H. G., 1178
Liu, O. C., *1687
Livingston, S., 2124
Llaurado, J. G., 1323
Lodwick, G. W., 1759
Lofgren, E. P., 401
Logan, G. A., 1746
Logan, J., 1644
LoRusso, V., *827
Losner, S., 1744
Lounsbury, J. B., 1334
Love, J., 1861
Lowenthal, M., *2035
Lowman, E. W., *18
Lyndrup, S., 878
Lyons, C., 1325, 1874
Lyons, H. A., *1939

M

McAfee, J. G., 306, 1757
McBay, A. J., 1343
McCabe, E. B., 1322
McCarroll, H. R., *1913
MacCarty, C. S., *799
McCaughan, J. J., 2229
McCormack, J. E., *1388
McCormack, L. J., 2023
MacCready, R. A., 418
MacDonald, H. N. A., *437

V 16
1957

McDonald, J. C., 1761
McDonald, J. E., *1131
MacDonald, R. P., *35
McElfresh, A. E., 1508
Macfarlane, C. A., *1905
Macfarlane, R. G., 1877
McHenney, W. H., 1880
McKendrick, G. D. W., 2012
McKendry, J. B. R., 2129
McKeown, T., 887
McKusick, V. A., *1
McLean, D. S., *1847
McLean, K. H., 1346
MacLean, L. D., 1504, 1637
MacMahon, B., 2005
McNamara, W. J., *1586
McSmythe, C., *31
McSweeney, A. J., 726
Madsen, C. M., 1195
Madsen, N. O., 304
Magee, A. C., *949
Magill, G. B., *1134
Mahaffey, D. E., 2228
Majoor, C. L. H., 1491
Maloney, W. H., *2077
Maluf, N. S. R., 1884
Mancuso, M., 1191
Marchesoni, M., 888
Margolis, H. M., *13
Marinesco, G., 1756
Maringer, S., *2035
Marrett, H. R., 2135
Martin, J. E., Jr., 636
Martin, P., 2011
Martin, W. J., 1869
Martin Arribas, G., 290
Mason, G. A., 2017
Masson, G. M. C., *1555
Master, A. M., *1771
Mateer, F. U., 194
Matis, J. D., 395
Mattel, C., 734
De Matteis, F., 747
Maur, M., 750
May, A. M., 751
Mayer, E., *431, *1227
Meadows, W. R., 406
Meigs, J. V., *729
Melschke-de Jongh, M. L., 413
McIslin, J., *1107
Melby, J. C., *1788
Mellcow, M. M., 1084
Mellemgaard, K., 395
Mellemgaard, L., 1754
Méndez Cashion, D., 1194
Meyer, K. F., 158
Meyers, J., 1752
Michelson, A. L., 1641
Michener, R. B., 91
Middleton, W. H., *2186
Miglio, M., 2119
Mikkelsen, W. M., 2221
Milgram, L., 108
Miller, J. H., *2063
Miller, R. F., 891
Millikz, P., 2125
Mills, C. A., 1761
Milne, M. D., 1329
Minard, D., *1813
Minnini, G., 897
Minno, A. M., *222
Minot, H., *1788
Misprcta, A., 739
Mobley, J. E., 1501
Mocsumann, H., 308
Modern, F. W. S., *241
Moerlel, C. G., 899
Monnaro, P., 1081
Moore, C., *1276
Moore, J. B., 2229
Morgan, D. D., *2186
Morris, A. J., *664
Morton, D. G., 295
Morton, J. H., *124
Moseley, J. E., 305
Moss, A. J., 1199
Moss, N. H., *322
Moss, P. D., 1202, 1635
Motulsky, A. G., *835
Mounsey, P., 1873
Moyer, J. H., 2135
Moyers, J., *2186
Mozzicouacci, P., 1085
Muehlberger, C. W., 726
Mueller, J. F., 1886
Müller, N., 1750
Muhlelsen, J. P., *2063
Mullan, J., 399
Murphy, J. W., 1751
Myers, J. A., 185
Myerson, R. M., *146
Myschetzky, A., 294

N

Nabarro, J. D. N., 1345
Nador, E., 1343
Naegell, H., 1210
Nalde, M., *681
Nash, E. C., *1899
Nellson, J. M. E., 186
Nesbitt, R. E. L., Jr., *1656
Nestel, P. J., 1507
Newman, L. R., *1547
Neyman, R., *2187
Nezelof, C., 2015
Nicholas, J. W., 1200
Nichols, W. W., 2233
Nicholson, E. E., *1058
Nicolau, S., 885
Nielsen, R. H., 635
Nieman, E. A., 1184
Nissen, R., 1193
Nitz, R. E., *2174
Nix, J. T., 1326
Nogueira, C., *2168
Nogues, A. F., 295
Nossal, E., *35

O

Obé, G., 1206
O'Brien, J. E., *827
O'Brien, J. L., 1879
Odland, T. M., *333
O'Keefe, M. E., 902
Olbrich, O., 1205
Olney, M. B., *239
Olson, R. E., vol. 164:1758; (correction) vol. 165:171
Olwin, J. H., 897
Onuigbo, W. I. B., 1756
Oosterhuis, W. W., 414
Ormsby, H. L., 409
Osborn, J. E., *799
Osborne, E. D., *1526
Osburn, H. S., 1752
Osserman, K. E., *671
Ostapiuk, F. E., 628
Otto, H., 1743
Overholt, R. H., 746
Owens, J. C., 1877

P

Paine, R. S., 1751
Palchetti, G., 1640
Palmer, E. D., 1497
Pankratz, P. J., 1486
Panter, K., 190
Pantridge, J. F., 1184
Panuccio, P., 1496
Papermaster, A. A., *1957
Papper, E. M., *144
Parker, R. T., 1197
Parr, L. J. A., 1318
Parrish, H. M., 2020
Parrot, J. L., 115
Parsons, W. B., 1188
Parsons, W. B., Jr., *234
Pattle, R. E., *1908
Paul, N. W., 1752
Payne, J. H., 1501
Peacock, R. A., 1212
Pearce, C. W., 2229
Pearson, C. M., 413
Pellitteri, O., *675
Pelner, L., *444
Peña Chavarria, A., *2063
Pennington, V. M., 293
Pernow, B., 879
Perret, G., 750
Perry, H. O., *1936
Peterman, M. G., *2161
Phillips, P. B., 1880
Picard, R., 396
Pickhardt, H. L., 757
Piéchaud, F., 889
Pierce, M., 1881
Di Pietro, S., 1343
Pihkanen, T. A., 293
Pines, A., 110
Pisani, G., 1759
Plotnick, H., *346
Polk, J. W., 2009
Pollack, H., *257
Pollock, T. M., 1760
Poskanzer, D. C., 2026
Pototschnig, C., 301
Poutasse, E. F., 196, *1521
Pratt, G. H., 751, 2230
Prince, C. E., *2155
Del Principe, A., 298
Prose, P. H., 892
Protheroe, R. H. B., 2131
Prout, C. T., *138
Pruzansky, J., *1560
Pudenz, R. H., *2068
Purriel, P., 741

Q—R

Qualheim, R. E., 1347
Quimby, E. H., *1558
Rabinovitch, J., 746
Raeburn, C., 1635
Rahman, S., 738
Raisz, L. G., 398
Rammelkamp, C. H., Jr., *664
Rapaport, H. G., *812
Rappaport, I., *431, *1227
Rashkis, H. A., 754
Raterman, L., *327
Ratnoff, O. D., *1096
Ravdin, I. S., *1373
Ravits, H. G., 892
Rea'e, N., 1316, 1316
Reese, A. B., 106, 1206
Reichelderfer, T. E., *1366
Reid, D. D., 1347
Rein, C. R., *1821
Reisner, E. H., Jr., 2108
Reitman, J. S., *943
Ressler, C., *135
Reynolds, H., *1823
Rhoads, P. S., *815
Ricci, G., 2128
Richterich, V. R., 732
Rider, R. V., *1233
Riker, W. L., 1874
Riss, E., 285
Rizzetto, E., 196
Rob, C., 1638
Robertson, R., 1503
Roble, T. R., 103
Robillard, R., 896
Robin, A. A., 1332
Robins, R., *330
Robinson, B., 2130
Robinson, P. L., *661
Robinson, R. G., 292
Roedling, H. A., *799
Rønnov-Jessen, V., 1080
Roger, J. P., 1636
Rogers, S. F., 887
Rohrs, L. C., *208
Rosa, L., 1208
Rosen, S., 1634
Rosenberg, H. S., 2014
Rosenberg, S. Z., 1496
Rosenblum, G., 1333
Rosenman, L. D., *348
Rosenthal, A. L., *1821
Ross, R. S., *1
Ross enberg, A., Jr., *1118
Roth, G. M., *799
Roth, J., 397
Rottino, A., 2005
Rovner, I. W., *317
Rowland, L. P., 1879
Roy, A. D., 1349
Royer, P., 1340
Rubbo, S. D., 2235
Rubenfeld, S., 1743
Ruiz Sanchez, F., 2020
Rushton, J. G., *437
Rusk, H. A., *360, *787, *791
Russek, H. I., *1772
Russey, J. C., *241
Russo, G., 890

S

Sabin, M., 1340
Sadusk, J. F., Jr., 1860
Sahlin, O., 1876
Salkin, D., 1994
Saltz, M., 1745
Salvatore, J. E., *2077
Salvini, M., 905
Sambhi, M. P., *2168
Sánchez-Lucas, J. C., 731
Sandberg, E. C., 296
Sandrucci, M. G., 1201
Sandweiss, D. J., *21
Sandy, J. T. M., 1327
Sanford, H. N., 301
Santos-Buch, C. A., 1494
Saphra, I., 119
Sappenfield, R. W., *2063
Sarason, E. L., 1335
Saslaw, M. S., *1129
Schaefer, G., *2163
Scharenberg, K., 103
Schaub, F., 1341
Schechter, D. C., 1885
Scheidhauer, E., 1879
Scheie, H. G., 297
Scheitlin, W., 1209
Schiff, P., 1501
Schilder, D. P., 2227
Schirger, A., 1342
Schlaepfer, G. A., 1860
Schmid, M., 900
Schmidtke, L., 2014
Schönberger, R., 2222
Schreiber, H., *1683
Schwab, R. S., *671
Schwartz, H., *144
Schwartz, J. W., 1204
Schwartz, S. O., 397
Schwartzwelder, C., 1754
Schwegman, C. W., *322
Scott, J. M., 1881
Scott, R. B., 186, 737
Scully, W. C., 1081
Shaffer, B., 1081
Shaiken, J., 734
Shanbrom, E., 2012
Shapiro, S., *1377
Shaw, R. E., 2126
Shea, J. G., *1241
Shedrow, A., 2011
Sheldon, C. H., *2068
Sheldon, M. B., 1753
Shelokov, A., *1366, 2026
Shenkin, H. A., *335
Shepherd, G. R., 1393
Sheraes, B. H., 1336
Sherman, R. S., *1134
Sherwood, R. W., *667
Shick, R. M., *799
Shields, D. O., 1317
Shiers, J. A., 901
Shiller, J. G., 1199
Shocket, E., 748
Shoemaker, E. H., 1755
Short, D. S., 1347
Shoshkes, M., *330
Shumacker, H. B., Jr., 102, 1873
Shuman, C. R., *1626
Shute, E. V., 631
Sieuteri, F., 110
Siderius, N., *11
Sieber, W. K., 1875
Sievers, M. L., 1631
Sigel, M. M., 1860
Sills, B., 2219
Silver, H. K., 2015
Silverman, J. J., *826
Sim, V. M., *1908
Simkó, I., 1749
Simpson, J. R., *35
Simpson, R., 748
Simpson, T., 1497
Sjoerdsma, A., 878
Skillern, P. G., 732
Skromak, S. J., 1210
Slager, U. T., 631
Slaney, G., 749
Slate, T. A., 1334
Slaviero, A., 738
Smalley, M. A., *827
Smellie, H., 1317
Smith, D., *150
Smith, G. L., 894
Smith, J. A., *2181
Smith, R. C., 2226
Smith, R. M., 116
Smith, S. M., *939
Smith, V. M., *2074, 2127
Smith, W. M., *1245
Smithwick, R. H., *1270
Smythe, C. M., 2223
Snell, B., 1330
Snyder, R. E., 1505
Sölvell, L., *1126
Sörensen, E. W., 193
Solval, A. R., 2023
Solfer, B., 298
Somers, K., 633
Sosman, M. C., 901
Soulié, P., 2116
Soutter, L., 2227
Spencer, F. C., 1187
Spicknall, C. G., 738
Spiegel, F. S., *205
Spink, W. W., 1742
Spivack, A. P., 740
Springall, A. N., *153
Starr, P., *1311
Starzl, T. E., 883
Steele, W., Sr., *154
Steinberg, I., 1758, 2135
Stephen, C. R., *949
Sterkel, R. L., 740
Stevens, G. M., 903
Steven, H., 293 (correction) 1067:1331
Stevenson, C. A., 904
Stolzer, B. L., *13
Stone, P. W., 189
Stousland, J., 1881
Strean, G. J., 1748
Streete, B. G., 1192
Streitfeld, M. M., 1507
Strom, J., 1510
Sugar, S. J., 411
Summerskill, W. H. J., 878
Surawicz, B., 99
Sutliff, W. D., 286
Svanborg, A., *1126
Swan, H. J. C., 1183
Swartz, F. C., *694
Swartzwelder, J. C., *2063
Swierenga, J., 1750
Swinefurd, D. Jr., 1077
Szanto, L., 1870
Szanto, P. B., *1690; 1700; *2193

T

Talbot, N. B., 303
T'ang, F.-F., 1207
Tarjan, G., 2124
Taylor, W. C., 194
Teixeira, C. P., 759
Teloh, H. A., 892
Teneff, S., 1323
Tether, J. E., *671
Thaler, H., 2119
Thavsen, J. H., 737
Thomas, C. B., 2238
Thomas, D. E., 750
Thomas, E. D., 2130
Thomas, J. W., 2226
Thomison, J. B., 196
Thompson, M. M., Jr., 903
Thompson, W. V., *453
Thorek, M., 1487
Thorpe, G. L., *1361
Thoth, F. Y., *2068
Tidrick, R. T., *327
Tietz, N. W., *2187
Tipner, A., 1393
Tobis, J. S., *2035
Tobler, R., 1883
Töndury, G., 1341
DeToni, G., 1341
Toole, J. F., *1261
Torres-Rodriguez, V. M., *1114
Tortora, J., 406
Tovell, R. M., 117
Tracy, E. J., *343
Treves, N., 1326
Truelove, S. C., 1209
Tu, W. H., *1953
Tuft, L., 278

Tuovinen, P. I., 307
Turkel, H. W., 1993
Turner, E. L., 1393
Turner, F. P., 1328
Turner, J. C., Jr., 287
Turner, J. H., *327
Turner, R. D., 894
Turner, R. F., *225
Tyler, H. R., 104
Tyson, W. T., Jr., *1665

U—V

Uehlinger, E., 1337
Uglov, F. G., 751
Umiker, W. O., 2022
Utz, J. P., 2132
Valcke, J., 884
Valle, M., 403
Valledor, T., 301
van Buchem, F. S. P., 401
Varco, R. L., *1788
Vastesaeger, M. M., 2239
Veenema, R. J., 1205
Venzlaff, U., 100
Verga, P., 1510
Vergani, O., 890
Vermeulen, C. W., 302
Vermillion, C. O., *2184
Vest, M., 1202
Vilkarl, S. J., 743, 1758
Vivell, O., 889
Vollset, P., 2238
Volpe, R., 2117
Volta, S. D., 1872
von Berlin-Helmendahl, S., 1339
von Hagen, K. O., *773

W

Waaler, B. A., 735
Waddell, W. R., 1327
Waegele, V. C., 308
Wagner, J., 1338
Walker, G., 2020
Walker, W., 1748
Walker, W. F., 2116
Wallach, J. B., 1348
Waller, J. V., *344
Wallner, L. J., 895
Walsh, J. R., 99
Walters, J. H., 2011
Walton, R. G., 1509
Wangensteen, O. H., *1957
Wapler, C., 747
Ward, T. G., *1366
Warden, H. E., *1788
Warin, R. P., 1212
Waters, W. J., 407
Waterstradt, K., 1333
Watkins, M., *830
Waugh, J. M., 103
Webb, W. R., 1188
Webber, B. M., 1643
Weber, J. M., *1899
Weber, M., *2181
Wechsler, R. L., *13
Wedum, B. G., *651
Wehrmacher, W. H., *349
Wellerstein, R. W., 296
Weingärtner, L., 1201
Weinstein, L., 885
Weinstein, S. B., 1495
Weisbrot, I. M., *2155
Weiss, I., *2155
Weller, C. G., 893
Wellings, F. M., 1860
Werner, S. C., *1558
Wexler, I. B., 1075
Whelan, T. J., Jr., 1505
White, J. C., *1924
White, M. A., *138
White, P. D., *70; *787; *791
White, W. L., *946
Wickerham, L. J., *47
Wiener, A. S., 1075
Wiggins, W. S., 1393
Wilkes, W. A., 874
Williams, B., *787; *791
Williams, G. T., 1755
Williams, J. H., Jr., 2235
Wilson, J. G., 1870
Wilson, R., 2224
Wimhöfer, H., 757
Winchell, P., *922
Winsser, J., 2125
Winter, C. C., 1884
Wise, R. E., 902
Witschi, E., 900
Wohlwill, F. J., 1196
Wolcott, M. W., 1193
Wolfe, S. J., 1644
Wolff, L., *1784
Wolford, J. A., *2181
Wolfson, S., *239
Wood, F. A., *1264
Wood, H. F., 2016
Wood, K. F., 2231
Woodruff, J. D., 886
Worton, E. W., *1652
Wright, C. C., *808
Wright, H. A., 1761
Wright, S. W., *2079
Wright, W. H., 1890
Wróblewski, F., 2007
Wylie, E. J., 1636
Wyman, M. G., 1197
Wysham, D. N., 1747, 1747

Y—Z

Yamshon, L. J., *934
Yates-Bell, J. G., 195
Yelln, G., *330
Yoel, J., 2010
Young, I. I., 1208
Young, P. C., 1757
Youngblood, V. H., 2234
Yudkin, J., 1495
Zapikian, A. Z., *1366
Zarowitz, H., 418
Zelsler, E. B., 1739
Zettlin, A. B., 1641
Zelman, S., *682
Zenker, R., 1191
Zier, A., 1332
Zimmerman, H. A., *2168
Zollinger, H. U., 1639
Zuspan, F. P., 1333

V 16
1957

INDEX TO PAGES

OF THE JOURNAL, ACCORDING TO WEEKLY ISSUES—VOLUME 165, SEPTEMBER-DECEMBER, 1957

Pages	No.	Date
1-120	1	September 7
121-204	2	September 14
205-316	3	September 21
317-430	4	September 28
431-642	5	October 5
643-766	6	October 12
767-914	7	October 19
915-1090	8	October 26
1091-1226	9	November 2
1227-1360	10	November 9
1361-1520	11	November 16
1521-1648	12	November 23
1649-1770	13	November 30
1771-1898	14	December 7
1899-2034	15	December 14
2035-2142	16	December 21
2143-2246	17	December 28

INDEX NUMBER: September 14, 1957
CLINICAL MEETING (Reports of Officers): October 26, 1957
INTERNSHIP AND RESIDENCY NUMBER: October 5, 1957
EDUCATION NUMBER: November 16, 1957

Extra copies of the index are available without charge from the Order Department, American Medical Association, 535 N. Dearborn St., Chicago 10

2371